TAX FAIRNESS: HOW DO INDIVIDUALS JUDGE FAIRNESS AND WHAT EFFECT DOES IT HAVE ON THEIR BEHAVIOR?

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By

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This dissertation is dedicated to the person who made it possible, my husband, Mark.

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This dissertation includes the results of two studies that investigated taxpayers' perceptions of the fairness of the federal income tax system. The focus of the first study was how individuals form fairness judgments about a tax system and what factors they attend to when comparing the fairness of two different tax regimes. A theoretical framework was developed based on equity and attitude theory. The study's hypotheses were tested based on the responses to a questionnaire sent to a cross-section of United States citizens. Regression analysis was used to assess the relative influences on the respondents' fairness judgments. The most important factor in explaining these fairness judgments was financial self-interest, however, concern for complexity and policy issues were also influential.

The second study investigated the influence of fairness on taxpayers' compliance decisions. The Theory of Planned Behavior was relied upon to develop hypotheses about the role of fairness in compliance decisions and what other factors are likely to influence

these decisions The study's hypotheses were tested based on the participants responses to three tax scenarios Logistic regression was used to identify which factors were useful in distinguishing between respondents who chose to cheat and those who chose not to The most consistently important influence on the respondents' compliance decision was moral obligation Other factors such as perceived control, the opinions of others and respondents' attitudes were also influential Perceived fairness was not a primary determinant of respondents' compliance choice

CHAPTER ONE
WHAT ROLE IS THERE FOR FAIRNESS CONSIDERATIONS IN TAX RESEARCH?

The federal tax system is often criticized. A variety of ills have been attributed to it. For example, it has been criticized for being hopelessly complicated, unfair, and easily manipulated. Further, noncompliance results in billions of lost revenue each year.[1] This criticism is in spite of the fact that there have been at least 4 substantial changes to the tax system in the last 11 years,[2] with tax reform taking center stage in the most recent (1996) presidential campaign. It is interesting to note that while the focus of the 1996 presidential campaign was tax simplification, the 1997 tax act will most certainly be remembered for adding complexity to the tax system. Along with the theme of simplicity the concept of fairness has been prominent in these debates.

Researchers that have investigated how individuals react to the perceived faults in the tax system have often tried to identify taxpayers' perceptions (e.g. perceptions regarding fairness, complexity, opinions of others, etc.) to see what effect these perceptions have on their behavior. There has been a vast amount of research that has studied the noncompliance phenomena. This research has been reviewed in detail by both Jackson and Milliren (1986), and Long and Swingen (1991). In addition, several

[1] Slemrod and Bakija (1997) report IRS estimates of noncompliance for 1992 to be $119 billion (for both the individual and corporate federal income tax). This represents 17% of the total tax liability.

[2] The 1986 Tax Reform Act (TRA86), The Budget Act of 1990, The 1993 Revenue Reconciliation Act, and the Taxpayer Relief Act of 1997.

books have been written on the subject (e.g. Cowell 1990, Lewis 1982, and Roth et al 1989). This research has focused on a wide range of factors that may affect compliance including opportunity, financial position, detection and penalty systems, complexity and individuals attitudes.

One factor that is continually raised, both in research on compliance and in the public debates over the tax system, is fairness. It is argued that a lack of fairness can be a justification for engaging in otherwise unjustifiable behavior. This is the premise of most of the research on compliance that included a measure of fairness: the more unfair the tax system is viewed, the more likely it is that taxpayers will be noncompliant.

In terms of proving this relationship, research to date has fallen somewhat short. In Chapter Three of this dissertation, compliance research that includes fairness as an explanatory variable is reviewed in detail. What is surprising in this line of research is that the presumed relationship is not always evident. There are times when unfairness appears to lead to noncompliance (e.g. Kinsey and Grasmick 1993, Kinsey and Smith 1989, Scott and Grasmick 1981, Smith 1992, Spicer and Becker 1980, Spicer and Lundstedt 1976, and Steenbergen et al 1992). However, there are other studies that report mixed or no effect for fairness (Collins et al. 1992, Kinsey 1992, Musso and Calvin 1984, Moser et al 1995, and Worsham 1996).

Understanding the role of fairness, both in terms of understanding public support for the tax system and identifying its possible effect on compliance with the tax law, is a worthy objective because of the frequency with which fairness is injected into the tax debate. The research reported here is an effort to learn more about both of these aspects of fairness. More specifically, effort is directed at understanding 1) how individuals

make judgments about the fairness of a tax system, and 2) how and if fairness perceptions influence individuals' compliance decisions An emphasis of this research is to be specific about defining fairness Several social psychology theories are drawn upon in an effort to explicate more clearly how individuals are hypothesized to form fairness judgments, and what theoretical influence these judgments are predicted to have on decision making Then these theoretical predictions are tested on taxpayers

Equity theory is the primary theoretical base for identifying the factors that influence individuals tax fairness judgments. Tax researchers commonly use terms like horizontal and vertical equity.[3] These are, however economic terms and not necessarily concepts that are salient to typical taxpayers In order to understand taxpayers, it is useful to draw on social and psychological theories that predict how individuals will behave The economic concepts have an important role in the tax policy debate but they may not be instructive in understanding taxpayers' decision processes.[4]

The value judgments that are the focus of this research relate to the following aspects of fairness identified by social psychology research distributive fairness, procedural fairness, and policy fairness. Distributive fairness refers to how fair an individual perceives his particular tax burden to be including in comparison to others Procedural fairness refers to the fairness of the procedures and processes of a particular

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[3] Horizontal equity refers to the distribution of the tax burden among "like-situated" taxpayers Vertical equity on the other hand refers to the distribution of the tax burden on households of different levels of well being.

[4] Slemrod and Bakija (1997) note this in their book "Taxing Ourselves a Citizen's Guide to the Great Debate Over Tax Reform " In discussing fairness they say "Before plunging into [a discussion of vertical equity] we must make a frank admission—fairness is not in the and a question of economics. Neither an A+ in Economics 101 nor a PhD in mathematical economics nor a lifetime of study of the theory of political economy will reveal the one true answer Fairness in taxation, like fairness of just about anything, is an ethical issue that involves value judgments (p 50)

tax system. Finally, it is usually the tax policies that drive the distributional effects of a tax system. Therefore, the concept of policy fairness, which refers to an individual's judgment of the perceived fairness of the tax policies that are being achieved by a particular tax system, is also relevant.

The research described in Chapter Two of this dissertation discusses these concepts in depth and constructs a method to test the relative influence of these various judgments on individuals' fairness beliefs. The hypotheses of this research are that individuals will consider these factors when assessing the fairness of alternative tax systems. However, the relative importance of each will vary systematically across individuals based on what motivates their attitude.

Of particular interest is the relative importance of financial self-interest compared with policy and procedural concerns. Identifying the extent to which fairness judgments may be biased by financial self-interest is important since individuals' perceptions of fairness are raised as reasons for the need to change the tax system. Additionally, perceived unfairness is one reason given for noncompliant behavior. In order for tax reform to remedy these unfairness perceptions, however, it is necessary to understand their origins.

The influences on tax fairness judgments are tested by having individuals compare the current tax system with an alternative tax system which resembles a flat tax. The two systems differ in terms of the financial effect on individuals, the policy objectives achieved, and the complexity of the procedures used to achieve the distribution. The subjects then rate the fairness of each of the two systems and the

relative fairness of the two systems compared to each other. The purpose of this first study is to learn more about how these fairness judgments are formed.

The second study, reported in Chapter Three, takes the fairness investigation a step further by attempting to clarify the behavioral effect of fairness perceptions. In prior research, fairness has been hypothesized to influence an individual's decision on whether or not to comply with tax laws. This premise is investigated by explicitly considering fairness in a theoretical framework along with other cognitive factors that are expected to influence an individual's behavioral choice. This framework is adapted from the Theory of Planned Behavior (Ajzen, 1991) which identifies the following influences on an individual's behavior: attitude, perceived control, assessment of the norms of others, and moral obligation. Fairness is hypothesized to affect behavior via its influence on an individual's attitude.

The Theory of Planned Behavior adds to the investigation of fairness on another level as well. It suggests what type of fairness should have the ability to influence an individual's behavior. The theory suggests that it is not general fairness perceptions (i.e. fairness of the tax system or amount of tax paid)[5] that influence a behavioral decision. Rather, it is specific perceptions related to the behavior in question, and the possible outcomes that may occur as a result of engaging in the behavior, that influence individuals' behavioral choices. For example, according to the theory, it is not an individual's perception of the general fairness of the tax system which will motivate him to engage in cheating in a particular situation. Instead, it is his belief about whether or not an unfairness will be exacerbated or alleviated if he cheats which will influence his

[5] Note that this is the type of fairness measure usually included in prior research.

decision In other words, specific behavioral choices are made based on an individual's beliefs relating to the specific situation

This premise is tested in the study reported in Chapter Three by exposing respondents to two compliance scenarios The Theory of Planned Behavior's predicted effects are used to explain their behavioral choice In addition, the effect of fairness on the behavioral choice is assessed by including both general fairness judgments and more specific fairness influences Examples of specific fairness influences include the fairness of the particular rule at issue and the respondent's judgment of how the fairness of the amount of tax he pays will be affected by engaging in the particular behavior

Both of these studies add to the rich history of research in taxpayers' perceptions Two different objectives are achieved in this dissertation. First, individuals' fairness assessments are dissected in an effort to understand what underlies these assessments Second, whether, how and to what extent fairness affects individuals' compliance decisions is analyzed

The remainder of this dissertation is organized as follows: in Chapter Two the theory methodology and results of a study investigating how individuals make fairness judgments are reported Chapter Three includes the theory, methodology and results of a study investigating the role of fairness in individuals' compliance decisions Finally, in Chapter Four conclusions are drawn

CHAPTER TWO
THE EFFECT OF TAX LAW COMPLEXITY POLICY OBJECTIVES AND SELF-INTEREST ON INDIVIDUALS FAIRNESS ASSESSMENTS

Introduction

The fairness of our current federal income tax system has been the subject of frequent debate One of the rallying cries of the 1996 presidential campaign was tax reform Two primary goals cited for tax reform were to make the tax system fairer and simpler It is easy to see that the current tax system is not simple it is less obvious why it is often perceived as unfair The 1986 Tax Reform Act (TRA86) had similar goals The primary political rationale for the TRA86 was "to restore fairness" to the tax system However, there is ample evidence that taxpayers did not perceive the new system as more fair (see, for example, Hite and Roberts 1992 and Kinsey 1989) A good understanding of the determinants of taxpayers' fairness judgments is necessary for making changes to the tax system that would improve its perceived fairness The purpose of the research described in this chapter is to provide such an understanding

This study begins with a theoretical framework Taxpayers fairness judgments are treated as a specific component of their attitude Therefore, both attitude theory and equity theory are drawn upon to obtain a more complete picture of how these fairness judgments are formed Reliance on attitude theory points out that a taxpayer's judgment of the fairness of a tax system is only one factor that affects his general attitude toward the tax system Further understanding what motivates his attitude is a prerequisite to understanding what

factors will be important in changing it. Second, equity theory offers the "set" of important factors that could theoretically influence an individual's fairness judgment. By combining the predictions of attitude and equity theory, a more precise model of taxpayers' fairness judgments is possible.

The theoretically derived hypotheses were tested in a unique setting. Respondents compared two tax systems that varied on three dimensions.[1] Their judgments about the fairness of the two systems as well as their judgments about the specific differences between the two systems were measured. Additionally, an attempt was made to identify their motivation for holding their attitudes. Then, their judgments of the tax system attributes, taking into account their motivation for holding their attitude, were used to explain the difference in their fairness judgments of the two systems.

The results of this study indicate that the primary determinant of the subjects' fairness judgments was not the two normative criteria (e.g. policy objectives and procedural justice) identified by equity theory; rather it was self-interest. While policy objectives achieved and complexity (the only procedural justice issue that was varied) were significant predictors of the respondents' fairness judgments, the magnitude of their influence was small in comparison to the influence of financial effect. Further, it appears from these results that taxpayers' primary motivation for holding their attitude toward the tax system relates to how they benefit from it. Thus, it is how they are financially affected by a tax system that is most

[1]The three dimensions were chosen based on the equity theory literature (discussed in the next section of the chapter). The factors that emerged as important were: policy objectives achieved, procedural issues and self interest.

salient to taxpayers when they are asked to make fairness judgments This has important implications for anyone relying on these judgments in comparing tax policy alternatives.

The remainder of this chapter is organized as follows: in the next section equity theory, attitude theory, and prior tax research are discussed and hypotheses are developed. Then, a tax fairness judgment model is proposed, and a methodology for testing the model is described. Following this, the results of the empirical investigation are presented Finally, contributions and future research are discussed

Theory and Prior Research

Equity Theory

The most basic theory of fairness is equity theory, whose simple premise is that individuals judge fairness on the basis of outcomes and believe that rewards and punishments should be distributed in accordance with recipients inputs or contributions Other researchers (for example, Deutsch 1975 and Leventhal 1980) believed that this description was too simplistic and that other factors also affect an individual's perceptions of fairness.

Leventhal offered the most comprehensive expansion of equity theory "justice judgment theory" He not only offered alternatives to equity theory in terms of judging the fairness of outcomes (distributive justice),[2] he also considered procedural justice (discussed below) to be an important aspect of overall fairness He posited that when individuals are concerned with distributive justice they determine the appropriate distribution of an outcome

[2]Leventhal offered both "equality" and "need" as alternative value bases that individuals might consider when judging the fairness of an outcome He speculated that there may be other relevant value bases depending upon the situation Of particular interest is how do individuals determine the appropriate value base This will be discussed shortly

based on a weighting of the relevant value bases. Then they compare the computed "fair" outcome with the actual outcome. A simplistic example, in terms of taxes, is to consider an individual who believes that an appropriate distributive justice rule would be that all taxpayers pay the same tax rate. To the extent that tax rates differ at different income levels, this individual will believe that the distribution is unfair.

Procedural fairness

Further, Leventhal argues that it is not just the end result - the distribution - that is important in assessing fairness. He holds that the process by which decisions are made and outcomes determined (known as procedural justice) is also important to individuals when judging whether an outcome is fair.[3] He hypothesized, however, that individuals do not apply the same judgment criteria consistently across events, the importance of any one rule to an event was likely to depend upon the circumstances. Specifically, he suggested that a self-interest bias exists, individuals will assign higher weights to the procedural or distributive rules that favor their own interests.

Greenberg (1987) tested the importance of procedural fairness in an experiment which varied both the procedure for determining a distribution and the amount of the distribution. When subjects received a low outcome and an unfair procedure, the unfairness of the procedure had an independent effect on the judgment of the fairness of the outcome.

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[3]In addition to the distributive value bases (equity, equality, need), Leventhal identified six procedural justice rules which he believed must be satisfied for an allocative procedure to be perceived as fair. The values that Leventhal believed were important in procedural justice include: consistency, bias-suppression, accuracy, correctability, representativeness and ethicality. In this study, the complexity of the tax system is hypothesized to violate some of these procedural justice criteria, and therefore be a source of perceived unfairness. This is discussed in more detail in the section of the paper that develops the tax fairness judgment model.

However, when the unfair procedure resulted in a high outcome, the unfair procedure was not considered when assessing the fairness of the outcome This result suggests the presence of an egocentric (self-interest) bias in assessing procedural fairness Greenberg's experiment offers two important insights for understanding how individuals make fairness determinations Namely, procedural and distributive fairness matter to an individual s assessment of the fairness of an outcome; and fairness perceptions are likely to be affected by an individual s self-interest.

Policy fairness

Kinsey's (1989) discussion of policy fairness can help address how an individual determines an appropriate distributive justice rule Kinsey argued that in terms of understanding tax fairness judgments, a consideration of distributive justice without a consideration of the policies that create the distributions might be missing the point. She identified the concept of policy justice which she defined as concern over the content of the tax laws It is the tax policies along with the tax rates, which determine the distribution rules of a particular tax system Therefore, it is the support, or lack of support, of the tax policies that 'should' determine whether an individual believes that a particular tax system is fair This is true, however, only to the extent that an individual is making an objective assessment of fairness

To summarize this discussion identifies the following factors that are likely to affect fairness assessments policy objectives, procedural issues, and self-interest This leads to Hypothesis One (stated in alternative form)

> **H_1:** In general, tax fairness judgments will be affected by an individual's judgments about the policy objectives achieved by the tax system, his/her judgments regarding the procedural fairness of the tax system, and his/her own self-interest.

All three factors are included in the tax fairness judgment model developed later in this chapter.

Functional Theory of Attitudes

While, in general, it is hypothesized that policy objectives, procedural justice and self-interest will affect an individual's fairness assessments, the importance of each is expected to vary across individuals. This notion is consistent with Leventhal's formulation. He suggested that the weights applied to the various judgment rules would vary across individuals, within an individual across situations, and may be subject to an egocentric (self-interest) bias. Whether or not self-interest is the primary determinant of taxpayers' fairness judgments is an important issue in deciding how much policymakers and researchers should be influenced by reported levels of perceived fairness.

To address the issue of when self-interest will dominate, it is first important to realize that fairness judgments are only one part of an individual's overall attitude toward the tax system. Therefore, to more fully understand taxpayers' fairness judgments it is necessary to move beyond a consideration of equity theories and consider also theories about attitude.[4]

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[4]Myers (1993 p. 583) defines an attitude as "a favorable or unfavorable evaluative reaction toward something or someone, exhibited in one's beliefs, feelings, or intended behavior." The information processing model of attitudes adds structure to this definition by modeling an individual's evaluation of an object as a function of his or her salient beliefs about the object. Each belief, in turn, links the object with a valued attribute (Ajzen 1982). In this regard, Ajzen argues that "perceived justice or fairness can best be defined as a *belief* about an exchange relationship." (p. 173).

Here the functional theory of attitudes (Herek, 1986) is drawn upon to provide hypotheses about when self-interest may dominate other equity theory concerns.

The functional theory of attitudes posits that attitudes serve a psychological function, and that the specific function served by an attitude determines how and what information will be deemed relevant in changing (or developing) that attitude. Herek (1986)[5] divides attitudes into two categories which emphasize the source of psychological benefit. If the source of benefit is the attitude object itself, then the attitude serves a utilitarian function: the benefit accrues from the object, and not from expression of the attitude. If the source of benefit is expression of the attitude (a psychological benefit) then the attitude serves an expressive function: the benefit accrues from the expression of the attitude, not from the object itself.[6] The relationship between attitude function and the benefit derived from holding the attitude is summarized in Table 2-1.

Notice that if there is a low amount of benefit derived from both the attitude object and from expression of the attitude, the attitude is deemed nonfunctional. The attitude is not strongly held and presumably, is of little interest. On the other hand, if the amount of benefit derived from the object and from expression of the attitude is high, then the attitude is likely

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[5]Herek's approach is consistent with earlier functional theory of attitude researchers such as Katz (1960).

[6]Herek identified three sub functions of the expressive attitude function. They are value-expressive, social-adjusive and ego-defensive. The value-expressive function seems the most relevant to tax attitudes. Herek defines value-expressive functions as affirming core values and/or aligning oneself with important referent groups. Less relevant to taxes, the social adjusive function is posited for attitudes that are used to obtain social acceptance, while an attitude identified as serving an ego-defensive function is used to reduce anxiety caused by intrapsychic conflict. In this study, the value-expressive function and the utilitarian function are considered the relevant functions for tax attitudes and subsequent discussion will be limited to them.

to be complex. In other words, the attitude is likely to serve both expressive and utilitarian functions.

Table 2-1 *Attitude Function*		
Amount of Benefit Derived from Attitude Expression	**Amount of Benefit Derived from Attitude Object**	
	LOW	**HIGH**
LOW	Nonfunctional	Utilitarian
HIGH	Expressive	Complex

Herek identifies three determinants of attitude function: personal, domain and situational characteristics.[7] Herek argues that an attitude whose function is complex should be especially susceptible to situational variables (e.g. characteristics of the setting) that focus an individual's attention on either the utilitarian or expressive aspect of an attitude. For understanding taxpayers' fairness judgments, personal characteristics are of more interest than situational characteristics. Situational factors would include aspects of the survey or experiment that primed the respondents to think of taxes in one way or another.[8]

[7] Personal characteristics are relatively stable psychological needs, values and orientations to the world. Domain characteristics are groups, objects, issues or behaviors toward which people hold attitudes (i.e. top cs). Situational characteristics include the setting (time, place), the actors, and the context (events preceeding and following the episode).

[8] Eagly and Chaiken (1993) provide evidence that suggests that situational variables may have affected prior research. They note that most research into political attitudes has found that self-interest exerts little apparent influence on political attitudes, while value-laden beliefs exert a strong impact. However, findings supporting the importance of self-interest have also been obtained, particularly when attention to self-interest has been primed. Therefore, it is important that any measurement of attitude function or assessment of individuals' fairness beliefs not lead them to consideration of one function as opposed to the other.

What does the functional theory of attitudes imply about tax fairness judgments? Attitude function is expected to mediate which factors individuals attend to when determining whether a tax system is fair. Figure 2-1 illustrates the attitude function hypotheses. If a taxpayer's attitude toward a tax system is motivated by his desire to express his/her core beliefs, then he/she is said to have a value-expressive attitude function. These taxpayers are expected to judge the fairness of the tax system based on an objective analysis of the features of the tax system.[9] Alternatively, if a taxpayer's attitude toward a tax system is motivated by how he benefits from the system, then he is said to have an utilitarian attitude function. These taxpayers are expected to label a tax system as fair if they believe it benefits them financially.[10] Finally, it is possible (likely) that taxpayers are motivated by both of these factors. This is considered a complex attitude function. For these taxpayers, fairness judgments are expected to be influenced by both an analysis of the features of the tax system and by their own self-interest.

In order to assess the importance of attitude function in explaining individuals' tax fairness beliefs, the following two hypotheses (stated in alternative form) were tested.

> **H_2:** Individuals for whom tax attitudes serve primarily a value-expressive function will be influenced more by their beliefs about specific tax policy issues and procedural fairness issues when assessing the fairness of a tax system than will individuals with a complex or utilitarian attitude function.

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[9] That is not to say that all individuals with value-expressive attitude functions will place the same value on each relevant goal. For example, in terms of distributive justice, one individual may believe that equality is the most important criteria, while someone else may believe that need is most important.

[10] To explain further, an objective fairness assessment will not be the goal of an individual with a utilitarian attitude function. Instead, fairness will merely be used to justify his assessment of the outcome (i.e. if the individual likes his tax distribution, then the system is fair; if he doesn't like it, then the system isn't fair). Policy objectives and procedural issues per se will not be a concern.

> **H_5:** Individuals for whom tax attitudes serve primarily a utilitarian function will be influenced more by how they are financially affected when assessing the fairness of a tax system than will individuals with a complex or value-expressive attitude function.

Prior Tax Research

Prior tax research has not comprehensively studied the factors that influence individuals' fairness assessments. Further, attitude function has not been explicitly studied in tax research, although there have been numerous studies that have investigated the effect of self interest on fairness assessments. These studies have shown mixed results. Gerbing (1988), Hite and Roberts (1991), and Wartick (1994) all found evidence of at least some correlation between self-interest and fairness assessments. However, Hite and Roberts (1992) found that only 2 out of 11 statements about the fairness of the Tax Reform Act of 1986 were significantly correlated with how the respondents thought their tax liabilities would be affected by various changes.

Kinsey et al. (1991) investigated outcome-processing versus norm-processing models of choice. Their approach was similar to the distinction between utilitarian versus value-expressive attitude function being made in this study. Kinsey et al. attempted to identify whether subjects used outcome-processing or norm-processing in assessing the fairness of their own personal tax situation by distinguishing between individuals who placed importance on the citizen-government exchange transaction (outcome-processing) as opposed to a rich-poor social comparison (norm-processing).[11]

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[11] It should be noted that Kinsey et. al.'s interpretation of which frame of reference is norm vs. outcome processing is not uncontroversial. In the present study attitude function was explicitly measured as the determinant of which factors are important to individuals in assessing fairness.

Their findings were interesting in that it appeared that their respondents "seem(ed) to use precisely that frame of fairness evaluation that will make them feel worse off" This suggests that taxpayers begin with an initial reference point of assuming unfair taxes and then focus their selection and processing of tax information on those aspects of the tax system that serve to confirm this belief" (p 868) This result supports the idea that self-interest affects taxpayers' judgments However, the focus of the study was the fairness of the amount of tax paid It is possible that focusing on the payment amount primed respondents utilitarian attitude function The focus of the current study is the fairness of the tax system If some taxpayers do have value-expressive attitude functions, a focus on the tax system may allow this influence to emerge

In addition to the study of self-interest, tax law complexity has also been a focus of prior research Complexity is of interest here because it is a potential procedural justice issue Prior tax research regarding complexity has shown mixed results as well Prior research suggests that complexity is linked to fairness (e.g. Hite and Roberts 1992, Long and Swingen 1991, Milliron 1985, Porcano and Price 1992) However, the nature of the relationship is ambiguous At times complexity has been found to decrease fairness perceptions (e.g Milliron 1985, and Porcano and Price 1992); while at other times it has been found to increase them (Christansen and Weihrich 1993)

The research described in this paper is designed to illuminate the role of self-interest (as well as complexity) in individuals' fairness assessments by providing a theoretical framework in which to study these fairness judgments In the next section of this chapter a model of individuals fairness judgments is developed

Tax Fairness Judgment Model

Theoretical Model

The tax fairness judgment model is derived from a general model of attitudes Rosenberg (1956) developed and tested an attitude model which is characterized as follows

$$A_o = \sum_{i}^{n} I_i V_i$$

where A_o = an individual's attitude toward object o
I_i = instrumentality (individual's subjective probability that object o will lead to attainment of goal i)
V = value importance of goal i (including the degree of satisfaction a person would experience if he obtained goal i)

Thus, an individual's attitude toward an object is a function of his salient goals regarding that object and his beliefs about whether the particular attitude object will accomplish those goals. More specifically in terms of taxes, an individual's attitude toward a tax system is a function of his beliefs about what goals will be achieved by the tax system and the relative importance and value he places on each of these goals In terms of a tax system, there are a number of relevant goals that could be considered Often mentioned goals are fairness simplicity and promotion of economic stability.[12] The particular goal of interest in this paper is fairness

Of specific interest, is how do taxpayers determine a value for I_F (the probability that tax system o achieves the goal of fairness) The hypotheses developed in the previous section make predictions about how taxpayers determine their subjective probabilities

[12] These goals have been mentioned frequently in political debates most notably by Adam Smith (in his 1776 book "the Wealth of Nations"), Ronald Reagan (during the tax debate over TRA86) and The National Commission on Economic Growth and Tax Reform (1996).

regarding the likelihood that a particular tax system will achieve the goal of fairness.

The earlier review of various equity theories led to the identification of the following factors that could be important to individuals when assessing the fairness of a tax system

- Policy objectives which lead to a certain distribution of taxes
- Procedural issues which are assessed using procedural justice criteria
- Self interest which leads some individuals to judge outcomes that favor them as fair

Further, it was hypothesized that individuals with a value-expressive attitude function will be concerned with a normative assessment of fairness. They will judge the fairness of the tax system in terms of the policy objectives it achieves and the procedures used to achieve them. Alternatively, individuals with a utilitarian attitude function are hypothesized to be primarily concerned with how they are financially affected by the tax system

This discussion leads to the following theoretical model

$$I_F = \alpha[a(\sum_{j=1}^{n} P_j O_j) + b(\sum_{k=1}^{n,m} PV_k PC_{kl})] + \beta[cF + d(F - F_o)]$$

where I_F = the probability that the tax system is fair
P_j = the importance of policy j
O_j = the probability that the tax system achieves policy j
PV_k = the importance of procedural variable k
PC_{kl} = the rating of variable k with respect to procedural fairness criteria l
F = perceived terms of trade
F_o = perceived terms of trade others
$\alpha(\beta)$ = degree to which attitude serves a value-expressive(utilitarian) function
a b c d = coefficients

Each of the variables in the theoretical model is discussed in the following subsections

Policy objectives

Policy judgments refer to the specific policy objectives that are being accomplished by a tax system. The policy objectives of any particular tax system, along with the tax rates, determine the distribution of the tax burden among individuals with different financial situations. Therefore, a normative consideration of distributive fairness requires a consideration of the policy objectives an individual values, and how well she believes the tax system achieves those objectives. In terms of the model, this is what is represented by the P_jO_j terms.[13]

Procedural justice

Procedural justice issues can arise both as a result of the particular tax objectives that are being accomplished as well as from a general procedural justice perspective.[14] Here, the interest is in the procedural issues relating to the tax system which are not necessarily a result of the particular policies being accomplished. Procedural justice issues are evaluated based on procedural justice criteria.[15] The relevant tax system components that could be judged

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[13] The sum of all the P_jO_j terms can be thought of as a Policy Objective score. For example, if an individual believes "helping the needy" is an important objective of a tax system, then she will assign a high P value to that objective. The more likely she perceives that a particular tax system achieves this objective the higher a value she will assign to O for the objective of "helping the needy." The higher the total score (this will be used in a model below as PO) an individual assigns to a particular tax system, the more likely she will be to assess the tax system as fair.

[14] For example, some rules may be complex in an attempt to achieve a particular social objective (e.g. earned income credit). This complexity resulting from a desire to achieve a social objective, is a policy issue as opposed to a procedural justice issue. On the other hand, some rules may be deemed unjustly complex, making it difficult for people to comply as well as leading some to believe more informed people are able to exploit the rules. There is some evidence that individuals think the rules can be exploited by wealthy individuals and businesses (Spicer and Lundstedt 1976), or that cheating can be justified as a way to cope with overly complex procedures (Carroll 1992). This is a more purely procedural justice issue.

[15] According to Leventhal (1980) the following criteria are relevant (these refer to the PC_k values): accuracy, representativeness, bias-suppressing, correctability, ethicality and consistency.

in terms of procedural justice issues include tax administration, tax enforcement, and the construction of the tax rules themselves. Not all procedural justice criteria apply to all procedural justice variables. An example of the relevant criteria for the tax rules might be that the tax rules are judged in terms of ability to use loopholes to avoid taxes (consistency, bias-suppression) and difficulty of computing tax due (accuracy).[16]

Self-interest assessment

Self-interest is being characterized here as "terms of trade"[17] as opposed to the amount of taxes paid. Terms of trade refers to the amount of taxes paid less the benefits received. To the extent that the benefits received are held constant, then any change in the amount of taxes paid should affect the fairness perceptions of individuals, particularly those with utilitarian attitude functions. Relative terms of trade, F / F_o, is included as well because individuals often make inter-person comparisons in deciding the fairness of an allocation. For example, if an individual believes he is no worse off than others in similar situations or others he compares himself to, he would be inclined to believe that the distribution is fairer than if he feels others are getting a "better deal" from the tax system. Both of these variables (terms of trade, and relative terms of trade) are perceptions. Both are expected to matter most to individuals with utilitarian attitude functions, since these individuals are deriving benefit merely from the attitude object itself, in this case the tax system.

[16]Like the policy objective variables, the sum of the PV_kPC_{kl} variables can be thought of as a procedural justice score (P). Again, the higher this score, the more likely an individual would be to judge the tax system as fair.

[17]This is often referred to as exchange equity.

Operationalization of Theoretical Model

The theoretical model described above is based on equity theory and attitude theory and describes an individual's judgment about the fairness of a tax system. However, the theoretical model is not a testable model. In order to test the study's hypotheses, the following modifications were made (formalized below) to the theoretical model. First, the subjects were asked to judge two tax systems which differed on three different dimensions: policy objectives, complexity (a procedural justice variable) and financial effect (self-interest). The subjects' ratings of these dimensions for each tax system were used to explain the differences in their fairness ratings of the two systems.[18]

Second, in order to test the importance of attitude function, a separate attitude function scale was included to measure the subjects' attitude function.[19] This variable was expected to interact with the three main effects identified above. To formalize, the model that was tested is as follows:

[18] To the extent that certain things were held constant (in particular tax administration and enforcement, government spending and the political system), no new information was learned about how important these variables are in determining fairness. However, the influence of the variables that were varied could be isolated with this differencing approach.

[19] This is the attitude function score in the following model. The questions were scaled such that the more positive (negative) a respondent's score, the more value-expressive (utilitarian) was his/her attitude function.

$$I_{F2} = I_{F1} - \alpha + \beta_1 AF + \beta_2 PO + \beta_3 SIMP + \beta_4 F + \beta_5 F_o$$

$$+ \beta_6 AFxPO + \beta_7 AFxSIMP + \beta_8 AFxF + \beta_9 AFxF_o$$

where I_{F2} = fairness judgment of alternative tax system
I_{F1} = fairness judgment of current tax system
AF = attitude function score
PO = comparative policy score of which tax system better achieves important policies
SIMP = comparative rating of complexity of each of the two systems
F = class variable measuring financial effect of alternative system versus current system
F_o = judgment of tax burden compared to others for each system

Hypotheses

Recall that H_1 states that, in general, policy objectives, procedural fairness, and self interest are expected to influence tax fairness assessments If this prediction is accurate, then the proposition in H_1 can be tested by the following

H_1 $\beta_2, \beta_3, \beta_4, \beta_5 > 0$

Additionally, H_2 states that taxpayers with a value expressive attitude function are expected to rely more on their judgments about policy objectives and procedural justice than are taxpayers with a complex or utilitarian attitude function. Confirming hypothesis two requires a significant interaction term This implies the following characterization of H_2

H_2 $\beta_6, \beta_7 > 0$

Similarly, taxpayers with a utilitarian attitude function are expected to be influenced more by how they are financially affected than are taxpayers with a complex or value expressive attitude function This implies the following tests of H_3

H_3 $\beta_8, \beta_9 < 0$

Research Method

Subjects

Experienced taxpayers were needed for this study. In addition, it was important that the subjects for this study consider as many real-world factors as possible when making their fairness judgments. For this reason, a controlled experimental situation was not the best environment for assessing individuals' real tax attitudes. Therefore, the experimental instrument was a questionnaire sent out to a cross-section of the United States population.

Subjects were selected based on a stratified sample. The sample was obtained from a commercial firm, Compilers Plus, which provided a stratified sample of households both above and below the median U.S. household income (approximately $35,000). The total design method (Dillman 1978) of maximizing response rates was used in an effort to obtain as many responses as possible.[28] One thousand questionnaires were mailed in Fall 1996 (prior to the presidential election). This initial mailing was followed-up with a postcard reminder one week later. A final follow-up, which included a duplicate questionnaire, was mailed to 25% of the non-respondents four weeks after the initial mailing. Of the 1,000 questionnaires originally mailed, 600 were sent to households that were below the median

[28]Response rates of recent tax research which at least partially relied on Dillman's method include Hite and Roberts (1991) 66%, Collins, et. al. (1992) 37%, and Gerbing (1988) 56%. A study by Copeland and Harmelink (1995) had just a 5.5% response rate, however they did not initiate any follow up procedures. The questionnaire used in this study was somewhat effortful since it was ten pages long and required some reading and comprehension. Therefore, a very high response rate (like Hite and Roberts) was not expected, however with the use of Dillman's follow up methods, a response rate of 20% was achieved (see Table 2.2 for details).

household income level, and 400 were sent to households that were above the median household income level [21]. Table 2-2 details the response rate for each group.

Table 2-2
Response Rates by Income Group

	Below Median Household Income	Above Median Household Income	Total
Initial Sample	600	400	1000
Less: Returned as Undeliverable	(86)	(23)	(109)
Adjusted Sample Size	514	377	891
Returned Questionnaires	93	98	201
Less: Unusable Responses	(10)	(3)	(13)
Net Usable Responses	83	95	178
Total Returned/Adjusted Sample Size	18.0%	26.0%	22.5%
Usable Responses/Adjusted Sample Size	16.1%	25.2%	20.0%

Questionnaire

The questionnaire (reproduced in Appendix A) was designed to obtain measures of the variables identified in the model. The following is a summary of the questionnaire contents.

[21] Based on pilot test results, above-median income households were more likely to respond to the questionnaire than below-median income households. Increasing the number of questionnaires sent to below-median income households lowered the overall response rate but provided a better split of respondents between below- and above- median income households.

- Respondents beliefs about what goals are important for a tax system to achieve were measured first.

- After reading about the alternative tax system they indicated:
  - which of the two tax systems they thought best achieved each of the goals identified in Section I of the questionnaire (this combined with the importance ratings resulted in the PO term),

  - and which system best achieved procedural fairness in terms of the complexity in the tax system (this provided the SIMP term)

- Respondents were asked whether they thought they would pay less tax under the current system or the alternative tax system (this provided the F measure)

- They were asked how much they pay compared to others with the current system and the alternative tax system (this provided the F_o measure).

- The function served by respondents tax attitudes was also measured.

- The dependant measure collected was the respondents' assessment of the fairness of the current tax system vs the alternative tax system (the $(I_{F2} - I_{F1})$ term)

One additional feature of the design is that each subject was exposed to <u>one</u> of two rate schedules as part of the alternative tax system (individuals were subject to a flat tax rate of either 20 or 25%) and one of two examples of how the new tax system worked. Individuals sampled from the income group lower than the median household income read an example which depicted a family with a household income of $22,000. Individuals sampled from the higher income group read an example which depicted a family with a household income of $59,000 (both examples are included in Appendix A).[22]

[22]Two different examples were used in order to provide examples that subjects would be able to relate to

Two rate schedules were also used in order to have a fairly even split between those who believed they would pay less with the alternative tax system and those who believed they would pay more [23] Table 2-3 shows the breakdown of respondents' reported financial effect by rate class and by reported income group

Table 2-3
Percentage of Each Income Group Reporting Each Financial Effect, by Rate Schedule

20% Tax Rate			
Income Group	**Pay Less**	**Pay Same**	**Pay More**
$0 - $20 000	68%	19%	12%
$20,001 - $50,000	47%	33%	20%
$50 001 - $75,000	38%	31%	31%
Over $75 000	64%	14%	21%
Total for 20% Tax Rate	51%	27%	22%
25% Tax Rate			
Income Group	**Pay Less**	**Pay Same**	**Pay More**
$0 - $20,000	29%	21%	50%
$20 001 - $50 000	46%	13%	41%
$50,001 - $75,000	35%	18%	47%
Over $75,000	40%	20%	40%
Total for 25% Tax Rate	40%	16%	44%

[23] Based on pilot test results, the majority of those exposed to the 20% tax rate believed they would pay less with the alternative system. Therefore using an additional 25% rate provided a more even distribution between those who believed they would pay less and those that believed they would pay more with the alternative tax system

Income Level, Income Example and Rate Level were included as independent variables to make sure that there were no unintended effects from these variables None of these variables was significant at the 05 level in explaining fairness judgments and are, therefore not included in the reported results

Results

Demographics of Respondents

Table 2-4 summarizes the demographics of the questionnaire respondents The average age of the respondents was 50 1 years. 74% of the respondents were men, 26% were women. The $20 001 $50 000 income group had the most respondents (71), while the Over $75 000 income group had the least (25) Most of the respondents had completed at least some college and considered themselves moderate to conservative on economic issues.

Variable Measurement

A general linear model was fit to the data in order to accommodate both continuous and class variables Financial Effect (F)[24] was treated as a class variable The other independent variables included in the model were Attitude Function (AF), Policy Objectives Score (PO), Complexity Rating (SIMP) and Financial Effect Compared to Others (FO) The dependent measure was fairness of the current system versus the alternative system Several measures of these variables were used. The details of how these variables were computed are discussed below

[24]Income Level, Income Example, Tax Rate and Education Level were also included as class variables in a preliminary analysis to make sure none of these variables had any unintended effects. Age was also included as a continuous variable None of these variables had a significant effect at the 05 significance level. Therefore, the results including these variables are not reported

Dependent variable (D1 and D2)

Two alternative measures of the dependent variable were used. D1 is the difference between the respondents' rating of the fairness of the alternative tax system and the rating of the fairness of the current tax system. These two questions were reverse scored so that a positive difference implies that the alternative tax system is judged fairer; a negative difference implies that the current system is judged fairer. D2 is the respondents' answers to the question, "compared to each other, which tax system is the most fair?" This question was coded on a +3 to -3 scale with +3 corresponding to "Tax System A is Much Fairer". The correlation between D1 and D2 is .63 (which was significant at the .0001 significance level). Models using D2 generally had higher R^2 values. The results were generally consistent between the two dependent variables. Results are shown for both dependent measures.

Policy objectives

Two different versions of the policy objectives variables were used. First, the responses for each objective of a tax system (achieve social goals, achieve economic goals, and just raise enough revenue to run the government) weighted by respondents' judgment of their importance were used. Second, a composite score, again weighted by importance, combining all three objectives was used.[25]

[25] Unweighted versions of the policy objectives were also used with virtually no difference in results.

Table 2-4
Sample Demographic Comparisons

Sample[a]		National Population[b]	
Age		Age	
Under 25	= 6%	20-24	= 9%
25-44	= 36%	25-44	= 44%
45-64	= 33%	45-64	= 29%
65+	= 25%	65+	= 18%
Family Income		Family Income	
$20,000 or less	= 18%	Less than $15 000	= 14%
$20,001 - $50,000	= 42%	$15 000 - $49 999	= 47%
$50,001 - $75,000	= 26%	$50 000 - $74,999	= 20%
$75,000+	= 15%	$75,000 +	= 19%
Sex		Sex	
Male	= 74%	Male	= 48%
Female	= 26%	Female	= 52%
Education		Education	
Did not Complete High School	= 4%	Did not Complete High School	= 18%
High School Graduate	= 17%	High School Graduate	= 34%
Some College	= 43%	Some College	= 24%
College Graduate	= 22%	College Graduate	= 16%
Post-Graduate Study	= 14%	Post-Graduate Study	= 8%
Who Prepares Tax Return?			
Me and/or Spouse	= 44%		
Paid Preparer	= 50%		
Other	= 6%		

[a]Numbers are expressed as a percentage of the sample of respondents
[b]Age and Sex Estimates U S Bureau of the Census estimates for 7/1/96 Numbers represent percentage of adults over age 19 in each category
Family Income' U S Bureau of the Census Annual Demographic Survey Total Money Income in 1995 Numbers represent the percentage of families in each category
Education U S Bureau of the Census, March 1996 Current Population Survey Number represents percentage of persons over 25 in each category

Comparing the responses of the individual policy objectives to the composite variable the only policy that appeared significant in explaining the respondents' fairness ratings is "achieving economic goals" Respondents' rating of which tax system better achieves the objectives of "achieving social goals" and "just raise enough money to run the

government," were not important in explaining their fairness judgments. Therefore, the only results that will be reported are those that include the weighted response to the question "which tax system is better at helping to achieve economic goals."

Procedural fairness

The only procedural fairness difference between the current and alternative tax system related to the perceived complexity of the two systems. Two questions related to this difference were in the questionnaire. One question dealt with the availability of loopholes and the other dealt with the amount of effort required to file a tax return. The average response to these two questions was used as the SIMP variable and this average was weighted by the importance rating that respondents had given to "be as simple as possible."[26]

Attitude function

Attitude function was measured using a "global" measure of attitude function obtained from the demographic section of the questionnaire where respondents were asked "Please circle a number to show what you mainly consider when deciding whether a tax system is fair or not." The response scale was "Objectives Achieved by Tax System" on one end, and "Financial Effect on Me Personally" on the other end.[27]

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[26] As with the policy objective variables, there was no difference in results between the weighted and unweighted variables. All reported results include the weighted SIMP variable only.

[27] Attitude Function was also measured using a six item scale which had proved successful during earlier pilot testing of the instrument. However, it was not successful here. The R^2 relating the detailed responses to the global response was just .09. Additionally, the scale obtained from the detailed responses provided virtually no explanatory power regarding respondents' fairness judgments. Further, a factor analysis of the six item scale revealed no meaningful factor loadings. Therefore, the global measure of attitude function is used in all of the reported results.

Financial effect (F) and financial effect compared to others (FO)

Financial Effect (F) was a class variable Respondents indicated whether they thought they would pay more (coded -1), the same (coded 0), or less (coded 1), with the alternative tax system (compared to what they pay with the current system) The FO term was the difference in their responses to two questions asking them if they paid too much/too little compared to others with the current system and the alternative system If this difference was positive then respondents believe their "relative" financial position would improve with Tax System A If it was negative, they believe it would worsen.

The FO variable is significantly correlated with the F variable, with a correlation coefficient of .55 (which is significant at the .0001 level) As will be seen in the results below, most of the explanatory power relating to financial effect seems to be associated with the FO variable This suggests that the respondents were concerned not only with how they were financially affected by the alternative tax system but also by how they fared relative to other people Table 2-5 summarizes the variables used in the final model and how they were measured [28]

[28] Note that the AF x F interaction was not significant so it was dropped from the model for ease of presentation

Table 2-5
Summary of Variables Included in Final Model

Variable Name	Measurement
D1 (Dependent Variable) (Relative Fairness of Current System Compared to Alternative System)	Section V, Question 2 - Section V, Question 1 (both reverse scored)
D2 (Dependent Variable) (Relative Fairness of Current System Compared to Alternative System)	Section V, Question 5 (coded on a +3 to –3 scale with +3 corresponding to "Tax System A is Much Fairer")
EG (Which Tax System Helps Achieve Economic Goals the Best)	Section II, Question 4 (coded on a +3 to –3 scale) multiplied by Section I, Question 3 (reverse scored)
SIMP (Rating of Complexity Responses)	Average of responses to Section II, Question 2 and Section II, Question 5 (coded on a +3 to -3 scale), multiplied by Section I, Question 2 (reverse scored)
F (Financial Effect of Alternative System Compared to Current System)	Class Variable corresponding to the responses to Section II, Question 9
FO (Financial Effect Compared to Others)	Section III, Question 2 minus Section III, Question 1
AF (Attitude Function)	Section VI, Question 5 (coded on a +3 to -3 scale)
AF X EG	Interaction
AF X SIMP	Interaction
AF X FO	Interaction

Descriptive Statistics

Table 2-6 reports the means and standard deviations of the variables used to test the research hypotheses. Additionally Appendix B includes a detail of the mean responses to each question in the questionnaire As reported in Table 2-6, the average respondent rated the alternative tax system as fairer than the current system believed he would pay less with the alternative system believed the alternative system was better at achieving simplicity goals and rated the alternative system as better at achieving economic goals The negative mean for Attitude Function indicates that the average respondent considered him/her self to be on the utilitarian side of the attitude function continuum

Table 2-6
Descriptive Statistics of Variables

Variable	Mean	Standard Deviation	Number of Observations
D1	2 24	2 61	178
D2	1 03	1 56	178
F	12	88	174
FO	69	1 66	172
SIMP	13 16	8 85	171
EG	5 43	10 84	171
AF	- 41	1 84	174

Hypotheses Tests

Hypothesis one

Hypothesis One states that individuals tax fairness judgments will be affected by their judgments about the policy objectives achieved by the tax system their judgments

regarding the procedural fairness of the tax system and their own self-interest. Table 2-7 details the regression results.

Table 2-7 reports the regression results with each independent variable entered separately.[29] The results indicate support for Hypothesis One in that each of the three variables has a statistically significant effect on fairness judgments. Results with the first dependent variable, D1, (Column 3 of Table 2-7) show that Financial Effect, F, is significant at the .03 level, Financial Effect Compared to Others, FO, is significant at the .0002 level, Complexity, SIMP, is significant at the .01 level, and Economic Goals, EG, is significant at the .004 level. The results using the second dependent variable, D2, are similar.

While all three hypothesized effects were significant, Financial Effect (both F and FO) contributed the most to explaining the respondents' fairness judgments. Of the total explained variance[30] for D1, 67% was explained by financial effect, 21% by complexity and 12% by policy objectives. D2 had similar results, although complexity had a somewhat greater influence (30%) and policy objectives were somewhat less influential (6%). The remaining question (from H2 and H3) is to see if attitude function can further explain differences across individuals.

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[29] The independent variables were correlated. Therefore, they were added to the model one at a time in order to assess the incremental explanatory power added by each variable. They were entered in the order of their correlation with the dependent variable. The variable with the highest correlation, F, was added first, and so on.

[30] From column 3 of table 2-8, adjusted R^2 for D1 is .315, and for D2 is .472.

Table 2-7

Regression Results

Indep. Variable	Column 1 Financial Effect Only		Column 2 Complex Rate Added		Column 3 Policy Objective Added		Column 4 Attitude Function Added	
	D1	D2	D1	D2	D1	D2	D1	D2
0	1.38* (.0005)	.54 (.02)	.40 (.315)	.29 (.22)	.54 (.22)	.125 (.28)	.39 (.38)	.28 (.23)
F 1	2.12 (.0001)	1.27 (.0001)	.82 (.07)	.128 (.59)	.95 (.03)	.19 (.40)	.73 (.11)	.10 (.50)
-1	1.69 (.0001)	.36 (.04)	.76 (.05)	-.47 (.02)	.89 (.02)	.38 (.06)	.67 (.10)	.40 (.06)
FO	.66 (.0001)	.32 (.0001)	.57 (.0001)	.25 (.0003)	.48 (.0002)	.20 (.003)	.46 (.0004)	.185 (.02)
SIMP			.09 (.0001)	.08 (.0001)	.06 (.01)	.08 (.0001)	.07 (.004)	.06 (.0001)
EG					.055 (.004)	.03 (.901)	.050 (.003)	.03 (.001)
AF							-.41 (.04)	.02 (.84)
AF*FO							.112 (.04)	.08 (.008)
AF* SIMP							.02 (.13)	-.001 (.89)
AF* EG							.01 (.20)	.007 (.19)
ADJ R^2	.214	.279	.279	.440	.315	.472	.331	.490
Add'l Varian Explain.	.214	.275	.085	.161	.030	.032	.010	.018

* Cell Entries are parameter estimates (p-values)

Hypotheses two and three

Hypotheses Two and Three predict that attitude function is helpful in differentiating individuals who will be more influenced by policy and procedural justice in assessing the fairness of a tax system, from individuals who are primarily concerned by their own self interest. There is very limited support for Hypothesis Three and no support for Hypothesis Two. As can be seen in Column 4 of Table 2-7, there were some statistically significant effects attributable to the attitude function variables However, the results were inconsistent across the two dependent variables.

With D1, there was a statistically significant negative main effect from Attitude Function as well as a statistically significant Attitude Function by Financial Effect Compared to Others interaction (AF x FO) [21] Theoretically, Attitude Function should not have a direct effect on individuals fairness assessments, but instead should only influence them through its interaction with other direct influences on fairness judgments. The negative coefficient on Attitude Function implies that, on average, respondents that had a value-expressive attitude function rated the alternative tax system as less fair than respondents who had a utilitarian attitude function The significant coefficient on the Attitude Function variable implies that this difference is independent of the respondents' ratings regarding policy objectives, complexity and financial effect.

Further the positive coefficient on the interaction term is contrary to the hypothesized effect. The hypothesized effect for the interaction is that it should have a

[21] None of the AF x F interactions were significant and they are not reported here for ease of presentation.

negative coefficient.[32] The negative main effect, combined with the positive interaction term, is somewhat nonintuitive [33]

With the second dependent measure, D2, the results are more consistent with the research hypotheses. There is no significant Attitude Function main effect, but there is a significant negative AF x FO interaction The interpretation of this result is that individuals with a utilitarian attitude function are more influenced by financial effect than individuals with a value-expressive attitude function. This result is consistent with H3

For both dependent measures, D1 and D2, there is no support for H2 because the interaction terms between Attitude Function and Complexity and Attitude Function and Economic goals are not significant. Furthermore, even though there are some statistically significant results, practically speaking the attitude function variable and its interaction with FO, add little explanatory power to the model The adjusted R^2 is increased by less than 2% by the addition of these attitude function effects

Discussion

The results from this study suggest that individuals' fairness judgments of federal income tax systems are strongly influenced by their financial self-interest. Taxpayers seem

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[32]The coefficient on this interaction is expected to be negative because individuals with a value-expressive attitude function are expected to be less affected by self-interest than individuals with a utilitarian attitude function. Mathematically a negative interaction coefficient would mean that the overall effect of FO would be smaller for individuals with a value-expressive attitude function and larger for individuals with a utilitarian attitude

[33]When the results were analyzed at least level of FF this negative main effect for AF (and positive interaction term) only occurred when respondents thought they would pay less with the alternative tax system The sign and magnitude of the two coefficients taken together imply two things First, on average, respondents with utilitarian attitude functions rated the alternative tax system as fairer than respondents with value-expressive attitude functions rated it. Second only respondents with value-expressive attitude functions were influenced by a concern over whether they were better off/worse off compared to others

particularly concerned with how their tax burden will change compared to how others tax burdens will change This outcome is shown in the results reported previously in terms of the amount of variance explained by the financial variables

Additionally inspection of the correlation between the financial effect variables and the policy and procedural variables suggests that these measures themselves may be related Table 2-8 shows the correlation between F_FO, the three policy objective ratings (SG RG, EG),[34] and the Complexity Rating (SIMP) It appears from these correlations, that the respondents systematically rated the tax system that favored them financially as the system that would better achieve the identified policy objectives. This result is consistent with individuals acting as if their attitude toward taxes serves a utilitarian function. Figure 2-1 has previously shown that when individuals have a utilitarian attitude function, their judgments regarding policy and procedural justice are likely to be influenced by their self-interest. Additionally the only policy objective that contributed to explaining fairness judgments was the achievement of economic goals This outcome itself could manifest from a consideration of self-interest.

In summary, it appears that financial self-interest, and comparative financial effect are the primary determinants of individuals' tax system fairness judgments Although other concerns have a small but significant effect on these judgments, self-interest seems to be the overriding concern This also suggests that (perhaps not surprisingly) at least in terms of assessing fairness, individuals take a utilitarian approach to taxes.

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[34]SG is the weighted response to "which system is better at helping to achieve social goals." RG is the weighted response to "which system is better at just raising enough money to run the government." EG is the weighted response to "which system is better at helping to achieve economic goals."

Table 2-8
Correlation Between Financial Effect Variables and Policy Judgments Variables

	F	FO	SG	RG	EG
FO	553* (.0001)				
SG	.401 (.0001)	.280 (.0003)			
RG	.185 (.02)	.21 (.005)	.259 (.0007)		
EG	.289 (.001)	.376 (.0001)	.432 (.0001)	.449 (.0001)	
SIMP	.30 (.0001)	.289 (.0002)	.396 (.0001)	.45 (.0001)	.48 (.0001)

*Cell entries are Pearson Correlation Coefficients (p-values)

Contributions and Future Research

The purpose of this research was to obtain a better understanding of the factors individuals consider when making judgments about the fairness of a tax system. A theoretical model was proposed based on the principles of equity and attitude theory. A differencing model was developed to test the specific importance of policy objectives, complexity and financial concerns. The main contribution of this research is the identification of financial effect (particularly in comparison to other taxpayers) as the primary determinant of taxpayers' fairness judgments. Additionally, while it may not appear at first blush that the functional theory of attitudes provides much insight into individuals' fairness judgments, the results of this study are consistent with the theory's identification of a utilitarian attitude function.

Future research into taxpayers' policy preferences and fairness assessments should take into account that these assessments may be more reflective of how individuals expect to be financially affected by the tax system (and potential changes) than reflective of an objective assessment of the merits of the policy or tax system

This study could be extended in several ways First it would be interesting to know whether individuals could be prompted to consider value-expressive concerns In a democracy it would be helpful to get an objective assessment of policy alternatives, not from the view of "am I better/worse off", but from the view of what would be best for the society (e.g. city state country). A more objective assessment may be possible, if individuals can be "primed" to consider value-expressive type concerns

Second, there were important components of the tax system which were not considered in this study Namely, the IRS, the political system that creates the tax rules, and the level of government spending were held constant. It would be interesting to know if and how taxpayers' fairness judgments are influenced by other features of the tax system Based on comments written by respondents (and anecdotal observation), the level of government spending is a 'hot' topic with many people [35]

Lastly, this study only investigated the factors that affect fairness assessments Of more practical interest is do individuals fairness assessments influence their behavior? Do these assessments affect their compliance with tax laws, their voting preferences, etc ? A fair tax system seems to be a universal goal This research is a step toward understanding how taxpayers determine what "fair" is

[35] Respondents were asked to rate the level of federal government spending on a scale of 1 7 with 1=way too little and 7=way too much The mean response was 6 45

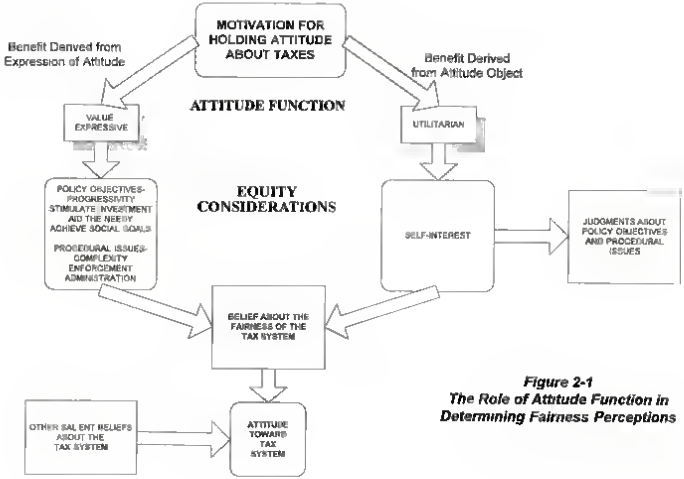

Figure 2-1
The Role of Attitude Function in Determining Fairness Perceptions

CHAPTER THREE
DOES THE THEORY OF PLANNED BEHAVIOR EXPLAIN THE ROLE OF FAIRNESS IN INDIVIDUALS' COMPLIANCE DECISIONS?

Introduction

Fairness perceptions have often been linked to tax compliance (for example Etzioni 1986; Hite and Roberts 1992; Moser et. al 1995, Spicer and Becker 1980, and Spicer and Lundstedt 1976). It is presumed that individuals' perceptions of the fairness of taxes[1] influence their decision on whether or not to comply with the tax law. There is, however, some uncertainty about this presumed relationship. For example, survey research has been criticized because of its inability to prove causality (Alm 1991). In addition, the survey results are far from conclusive regarding the extent and magnitude of influence provided by fairness perceptions.

Experiments on the other hand, which systematically vary the fairness of the outcomes (e.g. Moser, et al. 1995, Spicer and Becker 1980, and Vines and Wartick 1997), typically show that fairness manipulations do change the amount of income the subjects choose to report. However, these manipulations leave out much of the richness of the tax environment. For example, there is no real credible IRS threat, there is little opportunity for

[1] Prior research has included a variety of fairness measures such as fairness of the tax system, the IRS, the amount of tax paid, tax paid compared to others, etc.

moral and ethical influences to operate: there is no ability for the participants' attitudes and beliefs to influence them and there is usually no consideration of procedural justice issues.

The research described herein attempts to shed more light on the role of fairness by drawing on Ajzen's (1991) well-tested Theory of Planned Behavior (TPB). By putting fairness in context with other cognitive influences on compliance behavior, this theory provides a comprehensive framework for investigating the influence of fairness. This is an important step since, as Ajzen (1982) points out, "Although perceived inequity in social relations may sometimes be a powerful motivating force, it must be realized that it is only one of the many factors that influence attitudes and behaviors" (p. 183).

The TPB identifies the following factors that affect an individual's intention to engage in a given behavior: the individual's attitude toward the behavior, the opinions of referent others, and the individual's perception of the amount of control he has over the behavior. Fairness is one factor that is expected to affect an individual's attitude toward cheating on his taxes. Although not explicitly considered by the TPB, an individual's sense of moral obligation has also been identified as important when explaining negative behaviors.

While one objective of this research is to test the ability of the TPB to explain taxpayers' compliance intentions, another purpose of this research is to identify what type of fairness perceptions affect these intentions. Prior tax survey research (e.g. Collins et al. 1992, Mason and Calvin 1984, Kinsey and Smith 1989, Smith 1992, Spicer and Lundstedt 1976, and Steenbergen et al. 1992) has typically tried to link general perceptions of tax

fairness to compliance, with mixed results. Alternatively, the TPB predicts that fairness perceptions will only affect an individual's compliance decision to the extent that he/she believes that cheating will lead to a fairer (or less fair) outcome. This distinction, between an individual's general perception of fairness and his/her belief about the fairness of a given situation, was used to explain more precisely how fairness perceptions can influence compliance intentions.

The remainder of this chapter is organized as follows. In the next section, prior research regarding the effect of fairness on tax compliance is reviewed. This is followed by a discussion of the theory of planned behavior (TPB). The third section presents a method for testing the hypotheses. Then the results are discussed. Finally, contributions and future research directions are discussed.

Prior Research

There has been a wide range of research studying tax compliance. This research has been reviewed in detail by both Jackson and Milliron (1986) and Long and Swingen (1992). In addition, several books have been written on the subject (e.g. Cowell 1990, Lewis 1982, and Roth et al. 1989). The focus of this study, however, is the specific effect of fairness perceptions on taxpayers' compliance intentions.

There have been two types of compliance research which have included fairness as an explanatory variable: survey research (e.g. Collins et al. 1992, Kinsey 1992, Kinsey and Smith 1989, Mason and Calvin 1984, Scott and Grasmick 1981, Smith 1992, Spicer and Lundstedt 1976, and Steenbergen et. al. 1992) and experimental research (e.g. Moser et al. 1995, Spicer and Becker 1980, Vines et al. 1997, Worsham 1996). Figure 3-1 summarizes

the results of illustrative prior survey and experimental research that included some type of fairness measure as an explanatory variable

The survey research typically included some measure of overall fairness or an index meant to capture overall fairness and the dependent variable was usually also a general measure of compliance Examples of the dependent variable include likelihood of future cheating (Kinsey 1992) and acceptability of underreporting income (Smith 1992) Survey research, as a whole, has identified a somewhat weak relationship between fairness and compliance However there is little doubt that some relationship exists but whether it is causal, related to some other construct, or coincidental is unclear

The rather tepid results of the survey research are in sharp contrast to the results of experimental studies In experiments where fairness is manipulated subjects usually respond by cheating more when they are treated unfairly However, the experiments differ from the surveys in several important ways In the experiments the fairness manipulation is both specific to the situation and highly salient and the subjects' behavior is observed in this same specific environment Further there is usually little else for the subjects to consider Most of the experiments are conducted in a "neutral" environment[2] (Moser et al 1995 is an exception) where both the probability of penalty and its severity are known with certainty There is little of the richness of the tax environment present. For example, there are no ethical concerns Internal Revenue Service peer pressure and usually there are no procedural justice issues (Worsham 1996 is an exception) present in these experiments

[2]Subjects are not told that it is a tax experiment. They are merely allocating funds between "taxed" and "no taxed" investments.

In the present study an effort is made to combine the strengths of the survey and experimental research (realizing that the limitations of both can not be eliminated). One strength of the experimental research is that it focuses on behavior in a specific situation (which is how all cheating occurs, taxpayers do not cheat generally; they cheat in many specific situations). However, one of the major weaknesses of the experimental studies for understanding actual behavior, is that these specific behaviors are out in any context which remotely resembles a real tax compliance decision setting. Surveys are better at capturing the breadth of influences on "real world" decisions.

In this study, a comprehensive framework for explaining individuals' behavior (the Theory of Planned Behavior) was used to develop an experiment that asked subjects to make specific as-if choices within a real world context. Most experiments have asked subjects to "check their tax schema at the door". Alternatively, by relying on the TPB, this study sought to, in effect, measure their schema.[1]

The Theory of Planned Behavior

A discussion of Ajzen's (1991) theory of planned behavior is necessary to develop this comprehensive model of taxpayers' compliance behavior. Before discussing the theory however, the specific behavior of interest must be clarified.

Noncompliant behavior can take many forms from outright fraud to a minor unintentional computational error, with an almost endless list of behaviors in between. In

[1]The advantage of an experiment where fairness is manipulated is that subjects' experimental behavior can be measured. However, the context is usually too removed from the "real world" to draw definitive conclusions about actual behavior. The approach here is to give up some internal validity by measuring behavioral intentions instead of behavior and by measuring, rather than manipulating, influences on taxpayers' behavior. In exchange for giving up some internal validity, it is hoped that the focus on a more "real world" tax decision scenario will allow for respondents' complete tax schema to operate.

order to test Ajzen's theory and further explicate the role of fairness, the scope of the behavior of interest must be narrowed. First, any unintentional noncompliance[4] is beyond the scope of this study. Second, criminal fraud is also of limited interest. Instead, as a first step, this research will focus on three specific situations in which the subjects have some control over their tax reporting decision.[5]

Ajzen's (1991) theory of planned behavior (TPB) depicts behavioral intention[6] as depending upon three factors: 1) attitude toward the behavior (A_B), 2) subjective norms (SN), and 3) perceived behavioral control (PBC). Figure 3-2 illustrates the theoretical relationship. Further, each of the determinants of behavioral intention (i.e. A_B, SN, PBC) is itself a function of an individual's salient beliefs. As will be discussed in more detail below, attitude is a function of an individual's outcome beliefs, subjective norms are a function of an individual's referent beliefs, and perceived behavioral control is a function of an individual's control beliefs.

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[4]Unintentional noncompliance can occur for a variety of reasons (for example because the rules are too complex, are not known, or are constantly changing, or because of computational errors, etc). Factors affecting unintentional noncompliance are of interest, however, they are not related to individuals' motivations and attitudes per se, and therefore can not be addressed by a theory of planned behavior.

[5]The specific tax issues that were included in the experimental instrument were: charitable deductions, tip income, and home office deductions.

[6]Ajzen argues that as long as an action is under an individual's "volitional control", behavioral intentions permit a highly accurate prediction of the corresponding behavioral action. Since actual compliance behavior is difficult to measure, and as long as the behavioral intention (compliance intentions in this case) is clearly specified, focusing this research on compliance intentions as opposed to compliance behavior seems warranted. Note also that Parker, et al. (1995) make a similar argument when explaining their focus on driving intentions rather than the behavior itself. Nevertheless, an interesting extension of this research would be to trace compliance intentions to actual compliance behavior.

A number of social psychology studies have validated the TPB in a variety of contexts [7] Two studies are particularly relevant to the investigation of nonconformance with tax laws Beck and Ajzen (1991) studied the TPB's ability to predict dishonest actions by college students (specifically cheating on an exam, shoplifting and lying) In another study, Parker et al (1995) studied British drivers' intentions to engage in driving violations In addition to the three constructs identified by the TPB, both of these studies found that a "personal norm" construct was important as well

As discussed previously, of particular interest in the present study are individuals' attitudes because this is where fairness has an opportunity to affect compliance. However, in order to put fairness in context and to identify the relative effect of fairness when all theoretically important factors are considered, a test of all the factors identified by the TPB and prior research was undertaken Therefore personal norms, subjective norms, perceived behavioral control and, finally individuals' attitude toward engaging in the behavior will be discussed.

Personal Norms

Internalized norms are not explicitly considered by the TPB However Ajzen himself argues (Beck and Ajzen, 1991) that when studying dishonest behavior it may be important to consider not only perceived *social* pressures (i.e subjective norms) but also *personal* feelings of moral obligation. Parker et al. (1995), also in a study of negative behavior (driving violations), note the importance of an individual's personal beliefs about

[7] Ajzen (1991) reports on 16 tests of the theory all of which support its theoretical predictions. Subsequent to his review additional studies have expanded on the theory for such wide ranging behaviors as exercise (Ajzen and Driver 1991), problem drinking (Schlegal et al 1992), weight loss (Sparks et al 1995) and recycling (Taylor and Todd 1995).

what is right and wrong as distinct from an individual's beliefs about what others want him to do[8]

Beck and Ajzen found that including moral obligation increased the predictive power of their model somewhat. Additionally, moral obligation and attitude were significantly correlated. In Parker et al's study the combined effect of moral norms and anticipated regret was an approximate 10% increase in variance explained. Since tax cheating is a similar type of negative behavior, moral obligation is expected to be important above and beyond its effect on an individual's attitudes.

In their review of compliance research, Jackson and Milliron (1986) report on several tax studies that found that ethics generally increased compliance. However they also note the difficulty of defining ethical taxpayer behavior. Further they report[9] that moral concerns about tax compliance appeared to be relatively weak and that taxpayers were generally ambivalent about whether tax cheating was morally wrong.

Nevertheless, in a more recent study, Reckers et al. (1994) included the question "is tax evasion wrong in any amount?" They found that it not only helped predict tax evasion, but it also influenced the effect of other variables in the model. Further, Reckers et al. argued for a particularly meaningful role for the effect of ethical values. They argued that ethical values do not "intrude (on) or twist rational deliberations" (p. 827); rather they may supercede the consideration of any other determinant of behavioral choice. In other words,

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[8] Beck and Ajzen measured moral obligation as a combination of the following items: feeling guilty for cheating, cheating goes against my principles, and cheating is morally wrong. Parker et al included "such actions are morally wrong" and a measure of anticipated regret as surrogates for moral obligation.

[9] They quote a 1980 Westat study.

if a behavior is considered to be immoral, it will not be engaged in, no matter what extrinsic benefits are available

This suggests an interaction effect for moral obligation. Specifically, when moral obligation (not to cheat) is high, other motivations and inhibitors (i.e. attitude toward the behavior, subjective norms and perceived behavioral control) will not be considered. Only when moral obligation is low (or conceivably positive) toward cheating will these other effects become important.[10] In this study, moral obligation was included as both a main and interaction effect in order to test Reckers et al.'s conjecture.

Subjective Norms

As opposed to personal norms (an internal consideration), Ajzen describes subjective norms as the influence of referent others. Subjective norms refer to a person's beliefs about whether specific individuals or groups approve or disapprove of the individual performing a specific behavior.[11] Subjective norms can be assessed directly, or by considering the

[10]While Reckers et al. did report a significant interaction between ethical concerns and their other experimental variables in studies where moral obligation was included with other TPB constructs (e.g. Beck and Ajzen 1991; Parker et al. 1995) no significant interactions were reported. Rather, moral obligation influenced behavioral intentions as a main effect.

[11]Subjective norms are not unrelated to the concept of accountability (Tetlock, 1985). The difference is that accountability refers to how an individual's decision making may be altered as a result of his behavior being observed by or reported to another. Subjective norms act more as a cue to individuals. The opinions of others are one cognitive input into their decision making process. The research reported here does not include a condition where the subjects are accountable to anyone in making their decision.

fundamental beliefs (referent beliefs)[12] that underlie an individual's judgment of subjective norms

In a review of factors affecting compliance, Jackson and Milliron (1986) report on numerous studies which find that the compliance level of one's peers is significantly related to an individual's own level of compliance [11] Additionally, Steenbergen et al. (1992), in an analysis of the TRA86, found that the most important determinant of the change in respondents' commitment to comply was the opinions of others [4] These findings are consistent with the notion that subjective norms influence compliance behavior

Perceived Behavioral Control

In terms of the TPB, perceived behavioral control reflects the degree of control an individual perceives himself to have in performing the behavior in question. More specifically, control beliefs, the fundamental determinants of perceived behavioral control, refer to an individual's beliefs regarding the presence or absence of resources and opportunities together with the obstacles and impediments to performance of the behavior

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[12]Ajzen proposes the following algebraic representation for Subjective Norms: $SN = \sum_{j=1}^{n} b_j m_j$ where b_j is the normative belief concerning referent j, m_j is the person's motivation to comply with referent j and n is the number of salient normative beliefs An individual's subjective norms then can be measured either globally by asking him what other people think about him performing the behavior or they can be assessed using belief-based measurements In other words each of the b_j and m_j values the referent beliefs can be measured. Since individuals' subjective norms are not of primary interest to the study no attempt at uncovering the fundamental referent beliefs was undertaken here Rather subjective norms were assessed directly

[11]Another potential "referent other" is a professional tax preparer Tax preparers have been shown to influence individuals compliance behavior both negatively and positively Klepper and Nagin (1989) found that tax preparers increase tax compliance for unambiguous areas of the tax law but also decrease compliance by exploiting tax rules which are ambiguous

[4]Specifically the subjects were asked about the attitudes of people (discussants) with whom they had discussed the TRA86 The specific question asked was does the discussant believe "it is acceptable or unacceptable for people to pay less tax than they legally owe "

in question. Like subjective norms however, the specific determinants of perceived behavioral control are not the focus of this study. Therefore perceived behavioral control was measured directly.

Scott and Grasmuck (1981) found that inhibitors[15] interacted with individuals' motivations to explain compliance behavior. They found that when motivation to be noncompliant was high (e.g. positive attitude toward engaging in the behavior), the presence of inhibitors were more important than when motivation was low. Likewise, when inhibitors were high, motivation was not nearly as important in explaining noncompliant behavior. This suggests an interaction role for perceived behavioral control.

Attitude Toward Cheating

Subjective norms, perceived behavioral control and moral obligation will be assessed directly in this study. A more complex influence however, is expected from an individual's attitude. Ajzen (1991) is very precise about what type of attitude affects behavior. He argues that general attitudes (e.g. attitudes toward the tax system) are not good predictors of specific behavior (e.g. tax noncompliance). Instead, an individual's specific "attitude toward engaging in the behavior," is hypothesized to influence behavior.

Further, Ajzen describes an individual's attitude toward a behavior as determined by his evaluation of the outcomes associated with the behavior and by the strength of those associations. Algebraically, he models an individual's attitude toward a behavior as follows:

$$A_B \propto \sum_{i=1}^{n} b_i e_i$$

[15] Their inhibitors included guilt (which is included here as part of an individual's attitude toward the behavior), stigma (which is included here as a subjective norm) and legal punishment.

Where A_B = the attitude toward behavior B, b_i = the subjective probability that performing behavior B will lead to outcome i, and e_i = the evaluation of outcome i. The components of an individual's attitude are of interest because this is where, theoretically, fairness can enter as an influence on an individual's behavior. Before discussing the specific influences on attitudes, the following hypothesis predicts that the factors identified by the TPB will be significant in explaining an individual's compliance intention.

> **H_1** Subjective norms, perceived behavioral control, moral obligation and an individual's attitude toward cheating, will affect an individual's compliance intentions.

Notice that attitude, moral obligation and subjective norms are different facets of an individual's motivation to engage in a behavior, while perceived behavioral control relates to whether or not an individual is able to engage in the behavior. This distinction, along with the previous discussion of perceived behavioral control suggests the following interaction hypothesis.

> **H_2** Perceived behavioral control will interact with an individual's motivations (for example attitudes, moral obligation, subjective norms). In particular, when perceived behavioral control is low, an individual's motivations will have little effect on his/her behavioral intention. Only when perceived behavioral control is high will motivations become important.

Determinants of an Individual's Attitude Toward Cheating

In order to assess the importance of fairness, a consideration of the outcome beliefs which theoretically determine an individual's attitude toward a particular behavior must be

undertaken. Ajzen and Fishbein (1980) describe a procedure for eliciting salient beliefs [16] This procedure was used during a pilot test of this study and identified the following outcomes as potentially important in explaining individuals attitudes decrease in amount of tax paid, feelings of guilt, potential for punishment, engaging in illegal behavior, and improve fairness of tax paid This set of outcomes is consistent with factors that have been identified by prior tax research. Assuming these are the only salient outcomes, an individual's attitude toward cheating can be represented by the following equation.

$$A_c \propto b_1e_1 + b_2e_2 + b_3e_3 + b_4e_4 + b_5e_5$$

where A_c = attitude toward cheating

b_i = subjective probability that cheating will lead to outcome i

e_i = evaluation of outcome i

T = decrease in taxes paid

J = engage in illegal behavior

G = feelings of guilt

P = potential for punishment

F = decrease inequity of tax payment

The respondents' judgments of the favorableness (e_i value) and the likelihood (b_i value) of each outcome was measured. Prior to discussing methodological issues, however, the justification for including each of the previously mentioned outcomes is addressed

Decrease in taxes paid

The outcome of "decrease in taxes paid" is arguably the most obvious reason for engaging in cheating It is expected to be a salient outcome to individuals in determining

[16] For example in order to elicit salient beliefs regarding an individual's attitude toward not reporting all of their attitude toward cheating although not everyone is expected his/her tip income the following items were requested Please list all the advantages and disadvantages associated with not reporting all of your tips on your tax return What else do you associate with not reporting all of your tips on your tax return?

their attitude toward cheating However, not everyone is expected to value it equally or to agree on whether cheating will necessarily lead to a decrease in taxes paid

Guilt

Feeling guilty about cheating is the most likely outcome to be correlated with personal norms Prior social psychology research has included anticipated regret or guilt feelings as a separate construct. However, it seems more theoretically correct to include it as a potential outcome of the behavior and consider an individual's beliefs about this outcome as important in determining an individual's attitude toward cheating Kinsey (1992) included a variable measured as "the likelihood the respondent would feel guilty if he or she underreported income or overstated deductions" and found that it was significant in explaining the likelihood of future cheating. This result is particularly noteworthy since there was a good correspondence between the belief and the resultant behavior

Potential for punishment

Punishment can refer to monetary fines, embarrassment or even imprisonment All of these are possible outcomes associated with cheating if an individual believes there is a chance he will be caught. Individuals' perceptions regarding the probability of detection (see review by Fischer et. al. 1992) have commonly been found to be associated with compliance behavior This is consistent with the notion that potential for punishment is a salient outcome

Illegal behavior

The results from the belief elicitation procedure suggest that concern about engaging in behavior that is 'illegal' is a separate issue beyond a concern for incurring some type of

penalty It is likely that this outcome will be correlated with responses regarding potential for punishment. Nevertheless, since it was mentioned quite frequently as a separate issue respondents' beliefs regarding engaging in illegal behavior was also included

Fairness

Ajzen (1982), along with Greenberg (1982) argues that equity (as well as inequity) motivates behavior Individuals value equitable outcomes and will alter their behavior in order to achieve a more equitable outcome In an earlier section of this chapter, prior tax research addressing fairness was discussed Results from this research suggest that fairness influences compliance behavior The TPB gives structure to that influence by offering an individual's attitude as the vehicle by which fairness will influence behavior

The following two-part hypothesis summarizes the effects predicted to influence an individual's attitude

> **H_{3A}** If an individual believes that cheating will lead to a decrease in the amount of tax he pays, and/or a fairer amount of tax paid, and if he rates these outcomes as favorable then he will have a favorable attitude toward cheating on his taxes
>
> **H_{3B}** If an individual believes that he will feel guilty, face punishment if he cheats, and/or would be engaging in an illegal behavior; and if he rates these outcomes as unfavorable, then he will have an unfavorable attitude toward cheating on his taxes

In this study, tax system attributes, and individuals personality characteristics and traits will be considered exogenous The primary concern will be, once these beliefs are developed, do they affect compliance intentions as hypothesized Figure 3-3 summarizes the hypothesized predictions of this study The method used to test the validity of the

predictions regarding fairness and the use of the TPB to explain tax compliance intentions are described in the next section of this chapter

Method

Subjects

Subjects were obtained three different ways. One group of subjects was students at a large university who received extra credit for participating in this study A second group was parents from one grade of a local elementary school A modest contribution was made toward the cost of a class trip in exchange for their participation A third group was respondents from a random sample mail-out to residents of Florida and Georgia. Table 3-1 provides details of the number of subjects from each group

Table 3-1
Number of Responses by Group

Respondent Source	Number of Subjects*
Students	
Business Students	55
Accounting Undergraduate Students	25
Masters Students (MSA, MST, MBA)	28
Total Students	108
Non-Students	
Elementary School Parents	19
Random Mail-out	51
Total Non-Students	70
Total Respondents	178

* Response Rates by Group.
Students Over 75% of students in each class participated in the experiment
Parents: 54 instruments were distributed and 19 were returned for a 35% response rate
Random Mail-out. 250 instruments were mailed out, 10 were returned as undeliverable
And 51 responses were received for a response rate of 21%.

Experimental Instrument

Each experimental instrument included two of three compliance scenarios. Each subject responded to two scenarios (the three scenarios along with the questions asked for each scenario are included in Appendix C).

Each scenario described a tax compliance situation faced by a hypothetical person, along with enough information for respondents to determine the completely compliant course of action in the described situation. The purpose of including the completely compliant action was to eliminate heterogeneous beliefs between subjects regarding which actions would be considered compliant versus noncompliant. After reading each scenario, the subjects were asked what they would do if they were in that situation.[17] The tax reporting choice is the dependent measure.

Following the collection of this measure, a measure of the subjects' attitude, moral obligation, perceived behavioral control, subjective norms, and the fairness of the rule[18] were collected. This procedure was repeated for the second scenario. After subjects read both scenarios, they were asked the attitude determinant questions. Finally, in the last section of the questionnaire, general measures (i.e. measures not specifically related to a particular tax issue) of each of the constructs was obtained along with demographic information.

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[17]Specifically, in the tip scenario, they responded to the question: "If you were John, how much (if any) of the $3,000 unreported tips would you include on your 1996 tax return?". The dependent variable was treated as a class variable because subjects were either completely compliant, split the difference, or cheated as much as possible. This treatment will be discussed in the results section of this chapter.

[18]There were several fairness measures obtained. As will be discussed in the next few paragraphs, a specific fairness measure related to engaging in the specific behavior was collected as well as more general measures of fairness relating to the tax system as a whole. The fairness measure obtained in this section of the questionnaire related directly to the fairness of the tax rule that was at issue in the specific situation in question. For example, in the tip scenario, the question that was asked was: "Tips being subject to the same tax treatment as other wages is: (extremely unfair to extremely fair)."

Most of the independent measures are straightforward. However, two measures were obtained in order to determine the influence of the specific outcome beliefs on the respondents' attitudes. The first measure was the likelihood that engaging in the behavior will lead to the particular outcome. Second, they were asked to evaluate the favorableness of each outcome. These measures were combined for each outcome belief and then used to explain an individual's attitude toward cheating.[19]

In addition to obtaining measures of subjective norms, personal norms, perceived behavioral control, and attitude toward cheating,[20] general fairness measures were obtained (e.g. fairness of tax system). The purpose of collecting this data is to contrast the results from the present study with prior survey research.

Results

Demographics of Respondents

Table 3-2 reports the demographics of the questionnaire respondents. Additionally, the demographics for each group of respondents is reported in Appendix D. The average age of the respondents was 32 years. 47% of the respondents were men, and 53% were women. The $20,001-$50,000 income group had the most respondents' (67), while the over $75,000 income group had the fewest (30). Most of the respondents had completed at least some

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[19] The question construction and scaling choices were refined during pilot testing. A negative (positive) value for the evaluative rating implies that subjects consider the outcome to be unfavorable (favorable). The more they agree that the behavior would lead to a certain outcome, the higher the value assigned to the probability variable. Therefore, when these two are multiplied together for each outcome, a high negative (positive) product should affect the subject's attitude negatively (positively). This is because an outcome that is not (is) valued is rated as highly likely.

[20] A global measure of attitude was obtained. "In general, understanding the tips I received on my tax return would be: extremely good (extremely bad)." along with the outcome belief measures (i.e. fairness, amount of tax paid, potential for penalty, etc.).

college. Compared to the national average, the respondents were younger and more educated than average. This is not surprising since 61% of the respondents were college students.

Table 3-2
Sample Demographic Comparisons

Sample[a]		National Population[b]	
Age		Age	
Under 25	= 27%	20-24	= 9%
25-44	= 62%	25-44	= 44%
45-64	= 10%	45-64	= 29%
65+	= 1%	65+	= 18%
Family Income		Family Income	
$20,000 or less	= 17%	Less than $15,000	= 14%
$20,001 - $50,000	= 39%	$15,000 - $49,999	= 47%
$50,001 - $75,000	= 27%	$50,000 – $74,999	= 20%
$75,000+	= 17%	$75,000 +	= 19%
Sex		Sex	
Male	= 47%	Male	= 48%
Female	= 53%	Female	= 52%
Education		Education	
Did not Complete High School	= 1%	Did not Complete High School	= 18%
High School Graduate	= 5%	High School Graduate	= 34%
Some College	= 46%	Some College	= 24%
College Graduate	= 37%	College Graduate	= 16%
Post-Graduate Study	= 11%	Post-Graduate Study	= 8%
Who Prepares Tax Return?			
Me and/or Spouse	= 64%		
Paid Preparer	= 27%		
Other	= 9%		

[a]Numbers are expressed as a percentage of the total sample of respondents. Details of Demographics by group are reported in Appendix D.

[b]Age and Gender estimates: U.S. Bureau of the Census estimates for July 1, 1996. Numbers represent percentage of adults over age 19 in each category.

Family Income: U.S. Bureau of the Census. Annual Demographic Survey. Total Money Income in 1995. Numbers represent the percentage of families in each category.

Education: U.S. Bureau of the Census. March 1996 Current Population Survey. Number represents percentage of persons over 25 in each category.

Data Analysis - Attitude Determinant Hypotheses

Descriptive statistics

Table 3-3 reports the means and standard deviations of the variables used to test H_3, the influences on an individual's attitude. Respondents' attitude toward cheating in the tip scenario was the most unfavorable (with a mean of 3.42); while their attitude toward cheating in the business deduction scenario was the most favorable (mean of 4.45). As expected, three of the possible outcomes were rated as being unfavorable (feeling guilty, engaging in an illegal activity, and being subjected to some penalty), while two of the possible outcomes were rated favorably (decrease amount of tax paid, and affect the fairness of the amount of tax paid).

Table 3-3
Descriptive Statistics
Attitude Determinant Hypotheses

	Mean*			Standard Deviation			Number of Observations		
Variable	Bus Deduct	Tip	Char Cont.	Bus Deduct	Tip	Char Cont.	Bus. Deduct	Tip	Char. Cont.
Attitude	4.45	3.42	4.17	2.9	1.75	1.87	112	117	120
Tax Paid Belief	9.31	4.43	6.45	11.12	12.91	11.15	109	116	117
Illegal Belief	-5.04	-7.4	-6.85	9.32	11.79	8.27	111	115	120
Guilt Belief	-5.03	-5.97	-5.60	7.82	9.28	7.53	110	117	118
Penalty Belief	-7.93	-6.42	-9.07	6.13	7.00	8.29	110	116	119
Fairness Belief	11.77	6.39	9.22	8.97	8.29	8.52	109	116	119

*The attitude variable represents the respondent's attitude toward cheating in each of the scenarios. The responses ranged from 1-7 with 1 being "extremely bad" and 7 being "extremely good". The belief variables represent the multiplication of a likelihood score (1-9 with 7 being "extremely likely") and a evaluative score (+3 to -3 with +3 indicating that the respondent rated the outcome favorably)

The biggest differences in the independent variables across scenarios are the scores on the tax paid beliefs and the fairness beliefs. The high score on the tax paid belief in the

business deduction scenario is because respondents rated that outcome more favorably in the business deduction scenario (1.53) than they did in the charitable contribution scenario (1 14) and the tip scenario (75) The relatively high score on the fairness belief in the business deduction scenario is a result of two effects. First, respondents rated the outcome more favorably in the business deduction scenario (1.88 compared to 1 45 in the charitable contribution scenario and 1.33 in the tip scenario) Second, they also rated the likelihood of fairness being affected as higher in the business deduction scenario (5 42 compared to 4 87 in the charitable contribution scenario and 3 73 in the tip scenario)

Regression results

The independent variables used to test H_3 were significantly correlated with each other (see Appendix E for correlation statistics for each variable and scenario) Therefore, the parameter estimates of the regression are unreliable For this reason, the relative significance of each variable was assessed by adding each variable to the model one at a time The order in which the independent variables were added to the model was based on the relative correlation between each independent variable with the dependent variable. The results are discussed for each scenario separately and then the similarities and differences between scenarios are addressed.[21]

Business deduction scenario. Regression results for the business deduction scenario are reported in Table 3-4 All five independent variables made some positive contribution to explaining the respondents attitudes toward cheating in the business deduction scenario The most influential belief was respondents beliefs about whether or not the amount of tax

[21] A separate regression was run for each scenario because each subject responded to more than one scenario Including all of the responses in one regression would have introduced bias.

they paid would decrease as a result of cheating. Also influential, however, were whether or not they thought they would feel guilty, how they thought the fairness of the amount of tax they paid would be affected by cheating, whether they thought engaging in the behavior was illegal and whether they thought they would incur some penalty. The overall adjusted R^2 for the model was .491.

Table 3-4
Attitude Determinants Results
Business Deduction Scenario

Independent Variable	Variable Added to Model*				
	Tax Paid Belief	Guilt Belief	Fairness Belief	Illegal Belief	Penalty Belief
Tax Paid Belief	.11 (.0001)	.086 (.0001)	.076 (.0001)	.058 (.001)	.055 (.001)
Guilt Belief		.072 (.0008)	.064 (.002)	.052 (.01)	.05 (.01)
Fairness Belief			.041 (.029)	.041 (.02)	.046 (.01)
Illegal Belief				.046 (.015)	.043 (.02)
Penalty Belief					.041 (.04)
Adjusted R^2	.366	.421	.452	.476	.491
Additional Variance Explained	.366	.055	.031	.024	.015

*The independent variables were added to the model one at time in order to identify the incremental explanatory power of each variable. Cell entries are parameter estimates (p-values)

In addition to the main analysis reported in Table 3-4, analysis of whether there were any group or version[22] effects was also undertaken. As reported in Appendix D, there are some differences in the demographics of the sample groups as a result of using college

[22] It is necessary to check for version effects because respondents were exposed to 2 of 3 possible scenarios and the order was randomized. Therefore there were six different versions of the questionnaire.

students. When group and version were added to the model as class variables, no significant effects were identified [23]

Tip scenario. Regression results for the tip scenario are reported in Table 3-5 Only two of the independent variables were significant in explaining the respondents attitude toward cheating in the tip scenario The most influential variable was whether or not the respondent believed that cheating was illegal Of marginal importance was whether or not they believed the amount of tax they paid would be affected by cheating [24] The fairness belief variable had a p-value of 09 and its inclusion in the model increased the adjusted R^2 by only 006 The overall adjusted R^2 (with all 5 independent variables included) of the model was 354

As with the business deduction scenario, group and version were added to the model in order to identify any additional effect from these variables Neither version or group were statistically significant and the adjusted R^2 of the model was not improved by the addition of these variables.[25]

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[23] Means testing identified no differences in the means of the dependent variable across versions. There were differences in the means of the dependent variable across groups however Specifically the mean of the Accounting Students' responses was lower (3 8) than the means of the Masters Students' (4 80) and the Business Students' (4 77) responses No other group differences were identified. Since the group variable itself was not significant, these differences are assumed to have been explained by the independent variables included in the model

[24] When additional variables were added to the model its significance was eliminated However the R^2 of the model was increased by its inclusion

[25] There were differences among the means between versions and between groups. The mean attitude response for the version which included the charitable contribution scenario first and the tip scenario second was higher (4 0) than in the other three versions that included the tip scenario (3.26 3.25 3 15) Additionally the mean of the attitude variable was lower for Masters Students (2 67), than for the Parents (3.8) and the Business Students (3 7)

Table 3-5
Attitude Determinants Results
Tip Scenario

Independent Variable	Variable Added to Model				
	Illegal Belief	**Tax Paid Belief**	**Fairness Belief**	**Guilt Belief**	**Penalty Belief**
Illegal Belief	08 (.0001)	06 (.0001)	06 (.0002)	055 (.0002)	055 (.0002)
Tax Paid Belief		033 (.009)	024 (.09)	021 (.154)	02 (.18)
Fairness Belief			033 (.09)	033 (.10)	033 (.09)
Guilt Belief				009 (.60)	01 (.53)
Penalty Belief					.02 (.36)
Adjusted R^2	.314	.343	.349	.344	.354
Additional Variance Explained	.314	.029	.006	--	.01

*The independent variables were added to the model one at time in order to identify the incremental explanatory power of each variable. Cell entries are parameter estimates (p-values)

Charitable contribution scenario. Regression results for the charitable contribution scenario are reported in Table 3-6. Three of the independent variables were salient to respondents in terms of explaining their attitudes toward cheating in the charitable contribution scenario. The most influential variable was the respondents' beliefs about whether or not they would be engaging in an illegal behavior. Also influential however were their beliefs about whether they would feel guilty and whether engaging in the behavior would affect the amount of tax they would pay. The overall adjusted R^2 for the charitable contribution model was .3825. Neither respondents' beliefs about fairness or penalties provided any significant explanatory power to the model.

Analysis of group and version effects identified a significant version effect. Inclusion of version in the model increased the adjusted R^2 of the model to .404 (from .3825). The

cause of the version effect was a significant difference between the CT version (charitable contribution scenario first, tip version second) and the BC version (business deduction scenario first, charitable contribution scenario second). Respondents' attitude toward cheating was more favorable when they were they received the BC version (4.58) than when they received the CT version (3.78). A possible reason for this is that, in general, respondents had a more favorable attitude toward cheating in the business deduction scenario than in the other two scenarios (see Table 3-3). It is possible, that respondents' attitudes from the business deduction scenario may have carried over somewhat to the charitable contribution scenario.[26]

Table 3-6
Attitude Determinants Results
Charitable Contribution Scenario

Independent Variable	Variable Added to Model*				
	Illegal Belief	Guilt Belief	Tax Paid Belief	Fairness Belief	Penalty Belief
Illegal Belief	.125 (.0001)	.085 (.0002)	.071 (.0001)	.065 (.004)	.071 (.002)
Guilt Belief		.067 (.008)	.042 (.09)	.04 (.11)	.044 (.08)
Tax Paid Belief			.042 (.086)	.032 (.06)	.032 (.06)
Fairness Belief				.025 (.18)	.021 (.27)
Penalty Belief					.019 (.28)
Adjusted R^2	.30	.34	.377	.382	.3825
Additional Variance Explained	.30	.04	.037	.005	.0005

*The independent variables were added to the model one at time in order to identify the incremental explanatory power of each variable. Cell entries are parameter estimates (p-values)

[26]The group variable was not statistically significant. However, there were differences in the means of the groups. The Accounting Students mean attitude was significantly different (3.28) than the attitude of both the Business Students (4.65) and the Masters Students (4.38).

Discussion

In all three scenarios the theory was relatively successful at explaining individuals attitudes towards cheating. Table 3-7 summarizes the significant variables across scenarios H_{3A} and H_{3B} are supported by the results The adjusted R^2 of the models ranged from .354 to .491 In two of the scenarios consideration of whether or not the behavior was illegal was the primary determinant of the respondents attitudes (charitable contribution and tip scenario), while in the business deduction scenario the belief about whether the amount of tax paid would be affected was most influential

Table 3-7
Summary of Attitude Influences

Independent Variable	Business Deduction Scenario	Tip Scenario	Charitable Contrib Scenario
Tax Paid Belief	Significant	Significant	Significant
Guilt Belief	Significant	Not Significant	Significant
Fairness Belief	Significant	Marginally Significant	Not Significant
Illegal Belief	Significant	Significant	Significant
Penalty Belief	Significant	Not Significant	Not Significant
R^2	.491	.354	.38

How did fairness rate as an explanation for individuals attitudes? On the surface it does not appear to have been very influential The fairness variable included here was, in keeping with the TPB, individuals' beliefs about whether or not engaging in the specific behavior would affect the fairness of the outcome It was only statistically significant in explaining respondents attitudes in the business deduction scenario (p-value .026).[27] Why was fairness more salient in this scenario than in the others?

[27] It was marginally significant in the tip scenario (p-value of .09) but not significant at all in the charitable contribution scenario

One premise is that fairness only influences an individual's attitude toward cheating when he/she perceives an unfairness. In other words, if a rule/outcome is considered "fair", then an individual's attitude toward cheating is dominated by other factors. However, if a situation is perceived as unfair, this unfairness may cause them to have a more favorable attitude toward cheating. The results of this study are somewhat supportive of this conjecture.

Table 3-8 compares the fairness ratings and attitude ratings of each of the three scenarios. As Table 3-8 shows, respondents rated the home office deduction rule as quite unfair; they were basically neutral on whether or not the tip rule was fair, and they rated the charitable contribution rule as somewhat fair. This is consistent with the amount of influence that the attitude determinant measure of fairness had on respondents' attitudes. Their attitudes were influenced most by fairness in the business deduction scenario, they were slightly influenced by fairness in the tip scenario, and fairness was not a factor at all in the charitable contribution scenario.

To further investigate the role of fairness in explaining individuals' attitudes, respondents' ratings of the rule fairness were added to the earlier regression models (both in addition to the TPB fairness variable and in place of it). Interestingly, even though the influence of fairness appears to be conditioned on respondents' rating of the fairness of the particular rule, adding the rule fairness rating did not increase the explanatory power of either the business deduction scenario model or the charitable contribution scenario model.[28]

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[28] Also included were 1) an interaction term between rule fairness and TPB fairness, 2) respondents' rating of the fairness of the tax system, and 3) respondents' rating of the fairness of the amount of tax they pay. None of these variables were significant.

Table 3-8 *Fairness Variable Means*			
	Scenario		
Variable	Business Deduction	Tip	Charitable Contribution
Attitude[a]	4.45	3.42	4.17
Rule Fairness[b]	6.0	3.97	2.0
Prob. that Fairness would be affected[c]	5.42	3.73	4.87
Pleased that Fairness affected[d]	1.88	7.33	1.45

[a]Attitude toward cheating was coded on a scale from 1-7, with 1 = behavior extremely bad, 7 = behavior extremely good

[b]The rule fairness questions were as follows:

Business Deduction Scenario: The IRS prohibiting a taxpayer from deducting the expenses associated with a home office if there is any personal use of the office is:

Tip Scenario: Tips being subject to the same tax treatment as other wages is.

Charitable Contribution Scenario: I think the IRS requiring written acknowledgment for charitable contributions greater than $250 is.

They were coded on a scale from 1-7, with 1 = extremely fair, 7 = extremely unfair

[c]Coded on a scale from 1 to 7 with 7 = strongly agree, 1 = strongly disagree.

[d]Coded on a scale from +3 to –3 with +3 = strongly agree, -3 = strongly disagree.

With the tip scenario, however, respondents' rating of the fairness of the tip rule did increase the explanatory power of the model slightly. Rule fairness was significant at the .05 level and its inclusion increased the adjusted R^2 of the model by .007. Additionally, adding the more general fairness ratings, system fairness and amount of tax paid fairness ratings, had significant effects on the model.[29]

[29]Adding both of the general fairness measures increased the adjusted R^2 from .361 to .397. However, the sign on the system fairness variable was negative. This implies that the more unfair respondents rated the tax system, the less likely they were to have a favorable attitude toward cheating in this tip scenario. This result is counterintuitive and may be related to the correlation between the various fairness variables.

Data Analysis - Compliance Hypotheses

For each scenario the test of hypotheses one and two was performed based on the following relationship

$$CI = \alpha + \beta_1 A_c + \beta_2 SN + \beta_3 PBC + \beta_4 MO +$$
$$\beta_5 A_c * PBC + \beta_6 SN * PBC + \beta_7 MO * PBC$$

where CI = cheating intentions
A_c = attitude toward cheating
SN = subjective norms
PBC = perceived behavioral control
MO = moral obligation

These hypotheses were tested using logistic regression.[30] The importance of each independent variable was tested using a logistic regression stepwise selection model (based on the likelihood ratios). The results reported below identify the variables that were best at predicting the respondents' behavioral choice In most cases, the final model was able to correctly predict respondents' choice at an acceptable rate (correct classification rates in the 80-100% range)

Attitude (ATT), Subjective Norms (SN) and Perceived Behavioral Control (PBC) were scaled such that a higher number corresponds to cheating being more likely Moral Obligation (MO), on the other hand, was scaled such that a higher number corresponds to less likelihood of cheating Even though logistic regression coefficients can not be

[30] Regression analysis was not possible because the dependent variable typically took on only one of three values For example, respondents in the tip scenario were asked, "If you were John, how much (if any) of the $3 000 unreported tips would you include on your 1996 tax return?" The respondents either didn t cheat at all (i e. entered $3 000) cheated the maximum amount (i.e entered $0), or cheated partially (usually half) An ordered probit analysis would have been preferred if the covariances across groups were equivalent Since this condition was not met logistic regression was the logical choice since it requires the fewest assumptions about the underlying distribution.

interpreted in the same manner as linear coefficients,[31] the sign of the coefficients are still interpretable in the usual way. Therefore, H_1 can be restated as:

H_1: β_1, β_2, $\beta_3 > 0$, $\beta_4 < 0$

In addition to testing the main effects, H_2 predicts interactions between A_C and PBC, SN and PBC as well as MO and PBC. Therefore β_5, β_6 and β_7 are expected to be positive. Also included in the test of interactions was a test of whether moral obligation interacted with the other variables as predicted by Reckers, et al. (1994). If moral obligation interacts with the other independent variables, the sign on these interaction terms is predicted to be negative.[32]

Two additional tests were performed. In addition to testing H_2 with the global measure of attitude in a separate analysis, the global measure was replaced with the belief-based measures (this is reported as step two in the results that follow). Finally, the alternative measures of fairness were added to the model in order to identify whether there was a separate effect on the respondents' behavioral choice based on their general fairness perceptions. The results from this step are not reported because the additional fairness measures were never significant in explaining the respondents' compliance choice.[33] The

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[31] The coefficients in logistic regression represent the change in the odds ratio as the value of the independent variable changes.

[32] A negative interaction term translates into a smaller effect for SN, A_C, and PBC: the larger the value for moral obligation. Note that the prediction of a negative coefficient for a MO x PBC interaction is contradictory to the discussion regarding the PBC interaction terms. This suggests that if the MO x PBC interaction coefficient is positive (negative), the effect of PBC (MO) is dominating.

[33] This non result is quite noteworthy. When the TPB constructs are included, the fairness variables that are typically present in prior research were not useful in predicting respondents' compliance choice.

results for each scenario are reported separately first, then the similarities and differences between the scenarios are discussed.

Business deduction scenario

Descriptive statistics for each of the independent variables (including both the global and belief-based measures of attitude and the different fairness measures) at each level of the dependent variable are reported in Table 3-9. It is apparent from an inspection of these statistics that respondents who chose to "cheat" rated many of the independent variables quite differently than respondents who chose not to. For example, the mean of moral obligation for the non-cheaters indicates that they somewhat agreed that cheating (in this particular situation) was "morally wrong," while cheaters somewhat disagreed that cheating was morally wrong.

Table 3-10 reports the results of the logistic regression analysis. The business deduction scenario offers support for H_1. Attitude, subjective norms and moral obligation were all useful in explaining the respondents' compliance choice. Additionally, when the global attitude measure was used, there was a significant moral obligation by subjective norm interaction. The sign of this interaction indicates that the more likely a respondent was to believe that it was morally wrong to cheat, the less influential was their rating of subjective norms on their compliance choice.

Table 3-9
Descriptive Statistics
Business Deduction Scenario

Variable	CI=0*	CI=1	CI=2	Total
Observations	30	20	62	112
SN	4.27**	5.40	6.47	5.69
	(2.05)	(1.50)	(.99)	(1.71)
PBC	4.23	4.65	5.16	4.82
	(1.60)	(1.72)	(1.42)	(1.56)
ATT	2.34	4.05	5.60	4.46
	(1.54)	(1.36)	(1.42)	(2.00)
MO	5.77	3.7	1.97	3.29
	(1.89)	(2.0)	(1.71)	(2.43)
Guilt Belief	-11.17	-5.95	-1.53	-4.9
	(9.0)	(7.73)	(4.69)	(7.79)
Tax Paid Belief	.83	6.05	14.87	9.54
	(12.69)	(10.53)	(6.01)	(10.93)
Penalty Belief	-10.8	-5.9	-6.68	-7.64
	(6.55)	(9.27)	(5.46)	(6.79)
Fairness Belief	7.7	10.2	14.84	12.10
	(10.14)	(7.94)	(7.24)	(8.75)
Illegal Belief	-12.23	-9.2	-1.06	-5.51
	(10.53)	(7.79)	(5.82)	(9.15)
Rule Fair	6.3	5.55	6.10	6.06
	(.88)	(1.57)	(1.45)	(1.36)
Tax System Fair	4.97	4.10	5.05	4.86
	(1.30)	(1.7)	(1.37)	(1.45)
Amount Pay Fair	4.23	3.55	4.94	4.50
	(1.45)	(1.93)	(1.63)	(1.71)

*Dependent variable was coded as follows: 0 = deducted none of the home office expense 1= deducted some but not all (usually 1/2) of home office expense and 2= deducted all of the home office expense
**Cell entries are means (standard deviations)

When the global attitude measure was replaced with the attitude determinants (step two in Table 3-10), the respondents' beliefs about guilt, penalties, and whether or not the behavior was illegal were useful in explaining the respondents choice. Additionally, the interaction term dropped out and moral obligation entered as a main effect. Subjective norms were still significant.

Table 3-10
Compliance Hypotheses - Logistic Regression Results
Business Deduction Scenario*

	B	Chi-Square	P-Value	Correct Classify	Gamma	Model Chi-Square
Step One Global Attitude Measure						
Attitude	.68	14.84	.0001			
Subjective Norms	.71	17.96	.0001	90%	.913	94.39 (.0001)
Moral Obligation x Subjective Norms Interaction	-.06	6.95	.0084			
Step Two Belief Based Attitude Measures						
Moral Obligation	-.52	19.22	.0001			
Subjective Norms	.61	12.65	.0004			
Guilt Belief	.09	5.89	.015	91.2%	.826	98.63 (.000)
Penalty Belief	.08	4.42	.033			
Illegal Belief	.08	6.29	.012			

*Results reported are the variables that were included in the final model based on a stepwise selection method of identifying significant variables. B is the logistic regression coefficient. Chi Square is the chi-square value testing the significance of each independent variable included in the model. Correct Classify represents the percentage of cases that the model correctly classified using only the variables selected for inclusion based on the stepwise selection likelihood ratio criteria. Gamma is a measure of association between the independent and dependent variables. Model Chi Square is the chi-square test comparing the variables included in the model vs. a model with just a constant (p-value).

Perceived behavioral control, as a main effect or interacting with other variables (as predicted in H_2), was never significant. This lack of significance may have been because the mean of the perceived behavioral control variable was greater than 4.0, suggesting that most respondents believed that they would be able to "get away" with taking the deduction if they chose to take it.[34]

[34]There is one last noteworthy result which is not reported in the table. Group and version effects were tested by comparing each pairwise outcome. For each comparison for all three scenarios, subject group and version were added to the final model. Only once did these variables add explanatory power to the model. In the no cheating (0) vs. partial cheating (1) comparison of the business deduction scenario, Group was significant. The final model included Moral Obligation, Penalty Belief and Group. The chi square for this model was 38.96 (significant at the .000 level) and it had an 88% correct classification rate. Analysis of the individual groups identified one group that was significantly different than the others. The Business Students were much more likely to take the deduction than the other groups.

Charitable contribution scenario

Descriptive statistics for each of the independent variables at each level of the dependant variable are reported in Table 3-11 The logistic regression results are reported in Table 3-12 There is one unique aspect of the charitable contribution scenario (compared to the other two scenarios) It is likely that the respondents who chose to deduct nothing for the charitable contribution and the respondents who chose to deduct $250 (the maximum allowable without written acknowledgment from the charity) all considered themselves 'non-cheaters.' In a separate, unreported, analysis, there was little difference between respondents in those two groups Therefore a third step to the analysis was undertaken with the charitable contribution data. The "maximum cheaters" were compared to the other two groups combined This comparison is reported as step three in Table 3 12, and will be discussed shortly

In contrast to the business deduction scenario, in the charitable contribution scenario there was support for H_2, as the interaction effects dominated the results Regardless of which attitude measure was included in the analysis,[35] the perceived behavioral control by subjective norm interaction, the perceived behavioral control by moral obligation interaction and the moral obligation by subjective norm interaction were all significant predictors of the respondents' compliance choices

[35]When the global attitude measure was replaced with the belief based measures (step two in Table 3-12), there was no change in which variables were significant. Therefore, in this scenario attitude was not influential in the respondents compliance choices.

Table 3-11
Descriptive Statistics
Charitable Contribution Scenario

Variable	CI=0*	CI=1	CI=2	Total
Observations	20	52	40	112
SN	4.25** (2.10)	3.75 (2.00)	6.00 (1.32)	4.64 (2.07)
PBC	3.25 (1.17)	2.56 (1.10)	3.56 (1.27)	3.04 (1.26)
ATT	3.35 (1.69)	3.29 (1.49)	5.65 (1.35)	4.14 (1.85)
MO	4.80 (1.99)	3.62 (2.44)	1.43 (1.08)	3.04 (2.34)
Guilt Belief	-9.20 (8.75)	-7.31 (7.73)	-1.85 (4.93)	5.70 (7.61)
Tax Paid Belief	-.10 (13.88)	5.15 (10.05)	12.00 (8.78)	6.66 (11.23)
Penalty Belief	-7.8 (12.57)	-9.65 (8.50)	-9.45 (5.65)	-9.25 (8.48)
Fairness Belief	5.15 (8.15)	7.75 (9.46)	13.73 (8.58)	9.42 (9.46)
Illegal Belief	-10.00 (9.63)	-9.13 (8.32)	-2.70 (5.87)	-6.99 (8.38)
Rule Fair	2.00 (1.17)	2.25 (1.10)	2.55 (1.38)	2.31 (1.22)
Tax System Fair	4.65 (1.69)	4.75 (1.41)	4.98 (1.72)	4.81 (1.57)
Amount Pay Fair	4.25 (2.05)	4.40 (1.59)	4.58 (1.82)	4.44 (1.75)

*Dependent variable was coded as follows: 0 = deducted none of the charitable contribution, 1= deducted $250 and 2= deducted all of the charitable contribution.
**Cell entries are means (standard deviations)

Table 3-12
Compliance Hypotheses - Logistic Regression Results
Charitable Contribution Scenario*

	B	Chi-Square	P-Value	Correct Classify	Gamma	Model Chi-Square
Step One Global Attitude Measure						
Perceived Behavioral Control x Subjective Norm Interaction	13	24 66	0001			
Perceived Behavioral Control x Moral Obligation Interaction	- 11	9 96	002	84%	691	62 68 (0001)
Moral Obligation x Subjective Norms Interaction	05	4 14	04			
Step Two Belief-Based Attitude Measures						
Perceived Behavioral Control x Subjective Norm Interaction	13	23 25	0001			
Perceived Behavioral Control x Moral Obligation Interaction	- 11	9 88	002	83 8%	684	59 76 (0001)
Moral Obligation x Subjective Norms Interaction	- 05	3 92	05			
Step Three No Deduct and $250 Deduct vs Maximum Deduct (all variables)						
Moral Obligation	74	13 82	0002			
Perceived Behavioral Control x Subjective Norm Interaction	13	14 24	0002	89 7%	807	57 69 (0001)

*Results reported are the variables that were included in the final model based on a stepwise selection method of identifying significant variables B is the logistic regression coefficient Chi Square is the chi square value testing the significance of each independent variable included in the model Correct Classify represents the percentage of cases that the model correctly classified using only the variables selected for inclusion based on the stepwise selection likelihood ratio criteria Gamma is a measure of association between the independent and dependent variables Model Chi Square is the chi square test comparing the variables included in the model vs a model with just a constant (p-value)

The perceived behavioral control by subjective norm interaction had a positive coefficient This indicates that the more control respondents believed they had in taking the deduction, the more influential were subjective norms on their choice The perceived

behavioral control by moral obligation interaction had a negative coefficient. This indicates that the more morally wrong respondents believed taking the deduction was, the less perceived behavioral control mattered. Further, the negative coefficient on the moral obligation by subjective norm interaction indicates that the more morally wrong respondents believed taking the deduction was, the less subjectiva norms mattered. The overall interpretation of the three significant interaction terms indicates that low moral obligation and high perceived behavioral control were prerequisites for a noncompliant choice. If both of these conditions existed, then subjective norms influenced the respondents' choice.

Table 3-12 also reports the results (as step three) of an analysis which included only two levels for the dependent variable. Respondents who chose to report either none of the deduction or $250 were combined and compared to respondents who chose to cheat. This model was somewhat better at classifying respondents correctly (89.7% vs. 84% for the model with three compliance choices). In this model, moral obligation and the perceived behavioral control by subjective norm interaction were significant, with the expected signs. This provides support for both H_1 and H_2.

Tip scenario

Descriptive statistics for each of the independent variables at each level of the dependent variable are reported in Table 3-13. The logistic regression results are reported in Table 3-14. The tip scenario results provide support for both H_1 and H_2. Moral obligation entered as a main effect with the expected negative coefficient. Additionally, perceived behavioral control interacted with two other variables. The effect of attitude and subjective norms were both moderated by the effect of perceived behavioral control. The more control

respondents believed they had in terms of cheating, the more influential were their attitudes and their subjective norms. The specific component of the respondents' attitude (step two in Table 3-14) that appeared influential was their belief about how the amount of tax they paid would be affected by cheating.

Table 3-13
Descriptive Statistics
Tip Scenario

Variable	CI=0*	CI=1	CI=2	Total
Observations	36	11	59	106
SN	3.33**	4.91	5.90	4.92
	(2.01)	(1.64)	(1.42)	(2.03)
PBC	4.47	4.32	5.74	5.16
	(1.79)	(1.86)	(1.03)	(1.55)
ATT	2.33	4.00	4.08	3.48
	(1.57)	(1.41)	(1.58)	(1.75)
MO	6.42	4.36	4.07	4.90
	(.84)	(1.80)	(2.04)	(2.01)
Guilt Belief	-12.50	3.91	-2.00	-5.76
	(8.20)	(8.32)	(7.39)	(9.11)
Tax Paid Belief	-5.53	6.82	11.05	4.98
	(11.19)	(9.74)	(9.84)	(12.78)
Penalty Belief	-7.42	-7.91	-5.83	-6.58
	(11.47)	(5.24)	(5.01)	(7.81)
Fairness Belief	.08	7.36	10.39	6.58
	(6.82)	(7.62)	(7.11)	(8.47)
Illegal Belief	-14.97	-5.45	-2.34	-6.95
	(10.29)	(9.35)	(10.46)	(11.76)
Rule Fair	2.58	5.09	4.59	3.96
	(1.75)	(1.30)	(2.01)	(2.11)
Tax System Fair	4.55	4.82	5.14	4.91
	(1.86)	(1.89)	(1.49)	(1.67)
Amount Pay Fair	4.00	4.82	4.90	4.58
	(2.00)	(2.04)	(1.68)	(1.86)

*Dependent variable was coded as follows: 0 = included all of the tips in income, 1= included some of the tips in income and 2= excluded all of the tips from income.
**Cell entries are means (standard deviations)

Table 3-14
Compliance Hypotheses - Logistic Regression Results
*Tip Scenario**

	B	Chi-Square	P Value	Correct Classify	Gamma	Model Chi-Square
Step One Global Attitude Measure						
Moral Obligation	- 32	5 33	02			
Perceived Behavioral Control x Attitude Interaction	09	6 23	01	86 4%	734	68 28 (.0001)
Perceived Behavioral Control x Subjective Norms Interaction	.06	10.17	001			
Step Two Belief-Based Attitude Measures						
Moral Obligation	36	5 92	01			
Perceived Behavioral Control x Tax Paid Interaction	.02	20 23	0001	90.3%	808	85 83 (.0001)
Perceived Behavioral Control x Subjective Norm Interaction	09	17.29	0001			

*Results reported are the variables that were included in the final model based on a stepwise selection method of identifying significant variables B is the logistic regression coefficient. Chi Square is the chi-square value testing the significance of each independent variable included in the model Correct Classify represents the percentage of cases that the model correctly classified using only the variables selected for inclusion based on the stepwise selection likelihood ratio criteria. Gamma is a measure of association between the independent and dependent variables Model chi-square is the chi-square test comparing the variables included in the model vs. a model with just a constant (p-value).

Discussion

Table 3-15 summarizes the significant effects across scenarios Recall that H_1 predicts that the TPB constructs attitude, subjective norms, perceived behavioral control, and moral obligation will influence respondents' compliance choice. There is support for this hypothesis Specifically, subjective norms and moral obligation were useful in each of the three scenarios in predicting whether or not the research participants would choose to cheat. Perceived behavioral control never entered as a main effect, but was important as an

interaction effect. Attitude was significant in the business deduction scenario and entered as an interaction effect in the tip scenario

Table 3-15
Summary of Compliance Hypotheses Results

Independent Variables	Business Deduction Scenario	Charitable Contribution Scenario	Tip Scenario
Panel A: Hypothesis One (Theory of Planned Behavior Variables)			
Attitude	Significant	Not Significant	Interaction Only
Tax Paid Belief	Not Significant	Not Significant	Interaction Only
Guilt Belief	Significant	Not Significant	Not Significant
Penalty Belief	Significant	Not Significant	Not Significant
Illegal Belief	Significant	Not Significant	Not Significant
Fairness Belief	Not Significant	Not Significant	Not Significant
Subjective Norms	Significant	Interaction Only	Interaction Only
Perceived Behavioral Control	Not Significant	Interaction Only	Interaction Only
Moral Obligation	Significant	Significant[a]	Significant
Panel B: Hypothesis Two (Perceived Behavioral Control Interactions)			
Perceived Behavioral Control x Attitude Interaction	Not Significant	Not Significant	Significant[b]
Perceived Behavioral Control x Subjective Norm Interaction	Not Significant	Significant	Significant
Perceived Behavioral Control x Moral Oblig. Interaction	Not Significant	Significant	Not Significant
Panel C: Moral Obligation Interactions			
Moral Obligation x Subjective Norm Interaction	Significant	Significant	Not Significant
Moral Obligation x Attitude Interaction	Not Significant	Not Significant	Not Significant
Moral Obligation x Perceived Behavioral Control Interaction	Not Significant	Significant	Not Significant

[a]Moral Obligation was significant as a main effect in the two way comparison between the no-deduct and $250 deduct group and the maximum deduct group

[b]When the belief-based attitude measures were used there was a significant perceived behavioral control x tax paid belief interaction

H_2 predicts no interaction influence for perceived behavioral control Specifically, the more control individuals think they have in a situation, the more important will be attitude, subjective norms and moral obligation. This hypothesis receives strong support from the charitable contribution scenario and tip scenario results Perceived behavioral control interacted with subjective norms and moral obligation in the charitable contribution scenario, and with subjective norms and attitude in the tip scenario

Further, the business deduction scenario results are not inconsistent with H_2 In the business deduction scenario, there was little difference in the perceived behavioral control ratings across groups. Most respondents believed they had a fairly high degree of control over cheating Therefore, perceived behavioral control was not a dominant influence in this scenario Since perceived behavioral control was not an issue, it is consistent with the hypothesis that attitude, subjective norms and moral obligation were influential in determining respondents' compliance choice

There was not a specific research hypothesis regarding the interaction effect of moral obligation However, a test of the interaction was included here because of the inconsistent results of prior research. Reckers, et al (1994) predicted and found an interaction effect for moral obligation, while prior TPB research (Beck and Ajzen 1991, Parker, et al 1995) has only reported a main effect for moral obligation

Moral obligation proved to be a consistent influence on respondents' compliance choice both as a main effect and as a moderator of other variables The stronger the respondents' moral obligation not to cheat, the less likely they were to cheat and the less influential were other variables.

In summary, the results of this study give support to the Theory of Planned Behavior as an instructive model for predicting taxpayers' compliance choices. Moral obligation is an especially important influence as both a main effect and a moderating influence

One of the main purposes of this research was to identify the effect of fairness on taxpayers' compliance decisions In contrast to prior research, fairness was not important at any time for predicting respondents' compliance choices. Four difference measures of fairness were included in the analysis [36] None of these variables were ever statistically significant for predicting the dependent variable.

How can this result be reconciled with prior research? First, it is not surprising that experimental research that manipulated fairness should identify a significant influence for fairness. This is because it is usually the only thing that the subjects have to respond to and there is usually not any context for other influences (for example, moral obligation and fear of the IRS) to operate

Second, the results do show that fairness is correlated with the respondents choice [37] However, when all theoretically important variables are included in the model, respondents fairness judgments are not needed in order to predict their compliance choice. An inspection of the correlations between fairness and moral obligation and subjective norms (reported in

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[36] The four measures were whether fairness would be affected by cheating, whether the specific rule at issue was fair the fairness of the tax system and the fairness of the amount of tax paid.

[37] A complete report of the correlation between variables is reported in Appendix F The pearson correlation coefficients between respondents choice and the fairness variables are as follows Business deduction scenario fairness belief .35 rule fair .01 tax system fair .07 and amount tax pay fair .22 (fairness belief and amount pay fair are significant at the .05 level) Charitable contribution scenario fairness belief .30 rule fair .13 tax system fair .08 amount tax pay fair .08 (only fairness belief is significant at the .05 level) Tip scenario fairness belief .56 rule fair .43 tax system fair .16 and amount pay fair .22 (all but tax system fair are significant at the .05 level)

Appendix F) shows that fairness is significantly correlated with these variables. Therefore, while the effect of fairness does not appear to be as hypothesized (via its effect on individuals' attitudes), it may affect compliance indirectly by influencing individuals' moral obligation or subjective norms judgments. The nature of the influence of fairness on subjective norms and moral obligation could be investigated by future research.

This research did have some limitations. First, the instrument included hypothetical situations, therefore, actual behavior was not observed. It is possible that respondents did not respond honestly or that their responses did not represent what their actual behavior would have been.[38] An effort was made to ensure confidentiality and emphasize the necessity of thoughtful responses. Second, since the investigation included only three scenarios, the ability to generalize beyond these situations is limited. However, results that were consistent across all three scenarios would appear to be quite robust. Third, there is still much to learn about how these beliefs are formed, and how readily they can be changed.

Conclusions and Future Research

This research had several objectives. One objective was to learn more about what factors influence individuals' attitudes toward "cheating" in a tax situation. A second objective was to identify the influences on individuals' decisions regarding compliance. A third objective was to identify the affect that fairness perceptions may have on both individuals' attitudes toward cheating and their cheating intentions. These objectives were tested by exposing subjects to three different tax scenarios, having them indicate what

[38] It seems unlikely that respondents lied in a "compliant" direction. Other than in the charitable contribution scenario (where 36% of the respondents indicated they would cheat) over 50% of the respondents indicated that they would either partially or maximally cheat.

behavior they would engage in if they were actually in that situation, and then measuring a multitude of variables which were hypothesized to influence their decision.

Regarding the first objective, explaining individuals attitudes toward cheating the influences were dependent upon the scenario However, in general concern over whether the behavior was illegal and whether the amount of tax they paid would be favorably affected were useful in predicting respondents' attitudes in each of the scenario Guilt was also influential, while concern for penalties was of the least concern. Fairness was only mildly influential in explaining the respondents' attitudes

The results of the compliance investigation identified moral obligation as an important determinant of the respondents' compliance choice. The more likely respondents were to agree that cheating was morally wrong, the less likely they were to cheat. This was a strong result that bears further research For example, what causes individuals to have a strong moral belief about cheating? What aspects of the tax system and/or situation encourage and discourage that belief? Does the moral effect that appears in this study, where intentions are investigated, extend to actual behavior?

The effect of perceived behavioral control in the compliance model is also interesting When perceived behavioral control was important, it entered as an interaction effect. In both the charitable contribution scenario and the tip scenario It interacted with other variables (subjective norms and attitude) to influence how they affected individuals choices

Second, on average it was only in the charitable contribution scenario that perceived behavioral control was considered low (in other words, respondents rated it more likely that

the IRS would audit and/or detect cheating in the charitable contribution scenario than in the other two scenarios). The difference from an opportunity standpoint, between the charitable contribution scenario and the other two scenarios is that the charitable contribution rule required the taxpayer to produce documentation, while in the other two scenarios the IRS would be required to "find" something that the taxpayer did wrong. Interestingly, the number of respondents who chose to cheat was much less in the charitable contribution scenario than in the other two scenarios.[39]

Finally, the last objective of this research was to clarify the role of fairness. Based on the results of this research, it does not appear that fairness is a primary determinant of individuals' compliance choices. The theoretical prediction of this research was that fairness would enter into the compliance equation via its effect on individuals' attitudes. This conjecture does not appear to be correct. It can not, however, be said that fairness does not matter at all. This is because respondents' fairness judgments were correlated with two important determinants of their compliance choice, moral obligation and subjective norms. An interesting extension of this fairness investigation would be to see how important fairness is to taxpayers' sense of moral obligation and their judgment of subjective norms.

[39]The only subjects that cheated in the charitable contribution scenario were those in the maximum deduct group. 36% of the respondents chose to cheat in this scenario. In the business deduction scenario 73% of the respondents either partially or maximally cheated. While in the tip scenario, 66% of the respondents either partially or maximally cheated.

Figure 3-1 Panel A
Summary of Prior Survey Research

Authors	Fairness Variable	Dependent Variable	Effect
Spiner and Lundstedt (1976)	Index of Inequity[1]	1)Tax Resistance Scale 2)Admitted Tax Evasion	+ +
Scott and Grasmick (1981)	Perceived Unfairness of Exchange Relationship With Government	Admitted Tax Evasion	+
Mason and Calvin (1984)	Tax System Fair to Me Personally	Admitted Tax Evasion	no effect
Collins et al (1992)	Unfairness Index[2]	Misstatement of Tax Return Items	+[3]
Kinsey and Smith (1987)	Perceived Fairness of Taxes	1)Normative Commitment to Comply 2) Perception of Likelihood of Formal Sanctions 3) Underreporting Income	+ + no effect
Smith (1992)	Procedural Unfairness of IRS and Tax System	Acceptability of Underreporting Income	+
Steenbergen et al (1992)	Individual and Social Fairness of TRA86	Commitment to Comply	+[4]
Kinsey (1992)	Perceived Fairness of Tax Laws for Taxpayers in General and Taxpayers at Respondents' Income Level	Likelihood of Future Cheating	no effect
Kinsey and Grasmick (1993)	Vertical Equity Perceptions	Pre- and Post TRA86 Compliance Intentions	+

[1] Their index included items such as: ignorance about levels of taxes and spending, value received for tax dollar and fairness of taxes.
[2] Their fairness measure was a composite of the following questions: how fair are federal income taxes for your particular income situation, how fair a return do you get for taxes you pay and how fairly is the burden spread among individuals.
[3] Not significant in their overall model, but was significant in two out of four of their contingency models.
[4] Although statistically significant, effect was small and indirect. It affected the dependent variable through its effect on social sanctions (peers disapproval).

Figure 3-1 Panel B

Summary of Prior Experimental Research

Authors	Fairness Variable	Dependent Variable	Effect
Spicer and Becker (1980)	Horizontal Equity Manipulated	Income Reported	+
Meser et al (1995)	Horizontal Equity Exchange Equity Manipulated	Income Reported	subjects only responded to exchange inequity when horizontal inequity was also present.
Wenham (1996)	Procedural Justice Manipulated accuracy consistency vicarious knowledge of inequity	Income reported, # of periods of noncompliance, # of noncompliers	subjects responded to vicarious reports of inaccuracy but did not reduce compliance due to inconsistency. Inaccuracy seemed to have hypothesized effect, but wasn't significant
Vines and Wartick (1997)	Horizontal Equity Exchange Equity Manipulated	Income Reported	Exchange Equity moderated the effect of horizontal equity

Figure Two
Theory of Planned Behavior

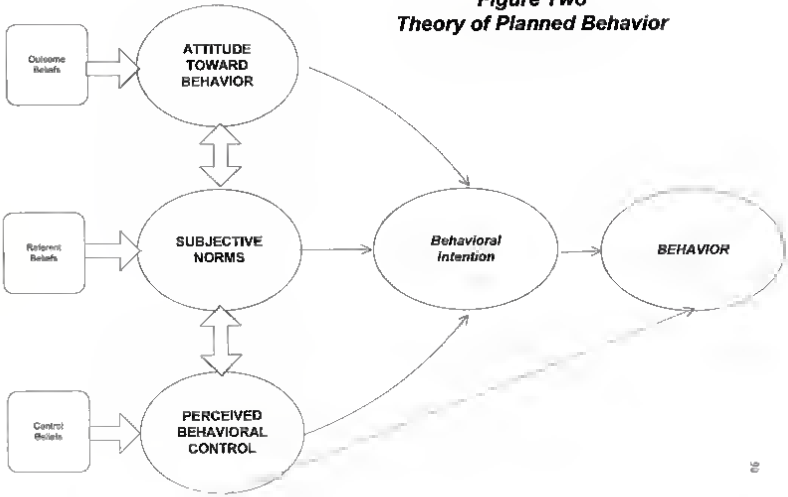
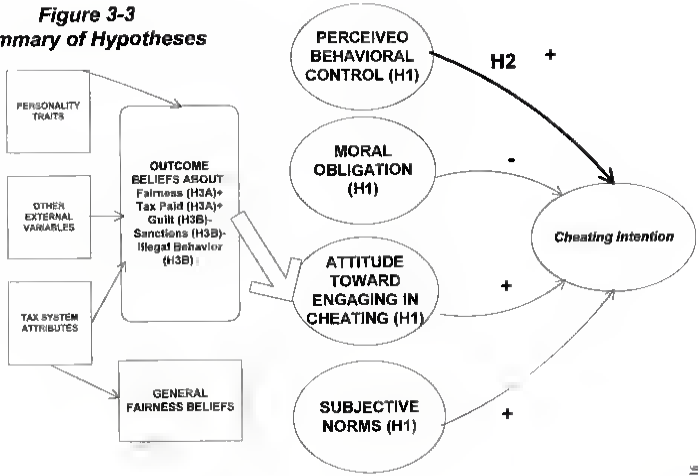


Figure 3-3
Summary of Hypotheses



CHAPTER FOUR
SUMMARY AND CONCLUSIONS

Overview

This dissertation includes the results of two separate studies that investigated the role of fairness in taxpayers' interactions with the federal income tax system. The objective of the first study, reported in Chapter Two, was to learn more about how taxpayers make judgments about the fairness of a tax system. The second study, reported in Chapter Three, had two objectives. One objective was to identify the effect of fairness judgments on taxpayers' compliance decisions. A second objective was to test the validity of the Theory of Planned Behavior in explaining individuals compliance choice.

Because fairness is such a prominent topic in the political discussion of tax reform, a better understanding of the concept is vital. Both of the studies in this dissertation contribute to a deeper understanding of fairness. Further, the results provide insight regarding how influential taxpayers' fairness judgments should be to the political debate. The research described in this dissertation sought to gain this better understanding by doing the following:

- Relying on theory to develop hypotheses about what factors are expected to affect taxpayers' fairness judgments.
- Using real taxpayers in settings where they would be influenced by as many real world factors as practical.
- Investigating the behavioral effect of fairness by placing it in a theoretical framework that specified how fairness could be expected to influence compliance behavior.

Study One: The Determinants of Fairness

In the first study, the focus was how taxpayers make judgments about the fairness of a tax system. Respondents reacted to the differences in policy objectives achieved and the complexity of the two systems they compared. To the extent that respondents believed one of the tax systems was better at achieving the policy objectives they valued, they were more likely to rate that tax system as fair. Likewise, to the extent that respondents valued simplicity, they were more likely to rate the alternative tax system[1] as fairer than the current system.

However, the primary determinant of the difference between the respondents' fairness judgment of the current system and the alternative system, was financial effect. The respondents were not only influenced by the financial effect on them personally. Even more important was whether, and to what extent, respondents' believed that the amount of tax they pay compared to what others pay would be different between the two systems.[2]

What conclusions can be drawn from this result? The present federal income tax system is designed to achieve a variety of objectives. Arguably, however, the most apparent feature of the tax system to an individual taxpayer is how much he/she pays. In terms of assessing the fairness of a tax system, the respondents in this study were most influenced by this feature. This would imply that taxpayers are not making objective assessments of fairness based on equity theory principles. Instead they may be subject to

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[1]The alternative tax system resembled a flat tax (see Appendix A for the complete instrument).
[2]Specifically they responded to the following question for each tax system: "Compared to other people, the amount of federal income tax that I currently pay (would pay under Tax System A) is:". The response scale was from 1 to 7, with 1 = much too high and 7 = much too low.

a self interest bias[3] labeling a tax system as fair if they believe it will favor them financially. Further, they do not appear to be concerned with only their financial effect; they also appear to make inter person comparisons of tax burdens.

Study Two: Compliance Intentions

In the second study, the investigation of fairness went a step further. Once fairness judgments are formed, do they have an influence on behavior? The behavior of interest was compliance with the tax law. The theoretical basis for the study was the Theory of Planned Behavior (Ajzen 1991). This theory (TPB) provided a framework within which to study various potential effects on compliance behavioral intentions. The factors that were hypothesized to influence these intentions were attitude toward cheating, subjective norms, perceived behavioral control and personal norms (moral obligation). The effect of fairness on compliance was hypothesized to enter via its effect on an individual's attitude toward cheating.

This hypothesis was tested in two steps. First a test of the influences on participants' attitudes toward cheating was performed. The participants' beliefs about fairness were included along with four other potential outcomes[4] hypothesized to

[3]Another possible interpretation of this result is that taxpayers' concerns about how much they pay overwhelm all other factors. It may be that they are not biased by self interest, instead they may just believe that it is the most important factor with which to judge the fairness of the tax system. There is some evidence that the respondents were particularly concerned about how much money the federal government spends. Respondents were asked to rate the level of federal government spending on a scale from 1 to 7 (where 1 = way too little and 7 = way too much). The mean response to this question was 6.45, implying a high dissatisfaction with the amount of money spent by the federal government (one respondent even added "8" to the scale and labeled it "way way too much"). This could easily lead to a preoccupation with the amount of tax paid when making judgments about a tax system.

[4]These other beliefs were: how the amount of tax paid would be affected by cheating, whether cheating would cause some penalty to be incurred, whether or not the participant would feel guilty if he/she cheated, and whether or not they thought they would be engaging in an illegal behavior. These outcomes were identified in a review of prior research and through a pilot testing procedure.

influence their attitude toward cheating. A test of how well these beliefs explained the respondents' attitudes was performed for each of the three scenarios.[5]

Second, a test of compliance intentions was performed which used attitude, along with the other TPB constructs, to explain the respondents' choice for each compliance scenario. Additionally, alternative measures of fairness were added to the model to see if they contributed to its explanatory power.

The results of the first step, identifying the beliefs that influenced the respondents' attitude, revealed some differences across scenarios. In general, concern over whether the behavior was legal and whether the amount of tax paid would decrease were useful in predicting the respondents' attitudes in each of the scenarios. Guilt was also somewhat influential, while concern for penalties was of the least concern. Fairness was only mildly influential in explaining the respondents' attitude. In comparing the effect of fairness among the scenarios, it appeared to be the most influential in the scenario with the most perceived unfairness.[6]

The investigation of the compliance hypotheses was a within scenario test. The effect of the TPB constructs were tested for each scenario, and not across scenarios. The results of this investigation identified moral obligation as an important determinant of the respondents' compliance choice. The more likely respondents were to believe that cheating was morally wrong, the less likely they were to cheat.

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[5]The scenarios included were a tip scenario, a business deduction scenario and a charitable contribution scenario. The scenarios are reproduced in Appendix C.

[6]Respondents' fairness belief was significant in explaining their attitudes in the business deduction scenario (see Table 3-4), only marginally significant in the tip scenario (see Table 3-5), and not significant at all in the charitable contribution scenario (see Table 3-6). Coincidentally, respondents perceived the rule to be the most unfair in the business deduction scenario and the least unfair (most fair) in the charitable contribution scenario.

Perceived behavioral control was influential as an interaction effect On average, it appeared from the responses that most people believed that it would not be hard to cheat if they chose to do so Of the three scenarios respondents thought they would have the most trouble cheating in the charitable contribution scenario In that scenario, cheating was much less prevalent than in the other two scenarios [7]

Subjective norms and attitude were also influential and their effect was usually moderated by respondents ratings of perceived behavioral control Further, subjective norms were also moderated by moral obligation

Fairness however was never a primary determinant of the respondents compliance choices When attitude was significant at explaining the compliance choice, it was not the fairness belief facet of respondents attitudes that was driving its influence. Guilt, amount of tax paid and concern over the behavior being illegal were the attitude determinants that influenced the respondents' compliance choices.

In summary, moral obligation, attitude, perceived behavioral control, and subjective norms have more to offer toward gaining insight into taxpayers' compliance choices, than does fairness. It would appear that researchers and policymakers should look beyond fairness for an explanation of why taxpayers cheat. A caveat to this conclusion is that fairness was correlated with moral obligation and subjective norms. Therefore, fairness may have an indirect effect on compliance to the extent that fairness influences taxpayers' moral obligation and subjective norms

[7] The higher the mean of the perceived behavioral control, the easier respondents thought it would be to cheat. The means for this variable for the three scenarios were as follows charitable contribution scenario 3 04 business deduction scenario 4 82 tip scenario 5 16 Further the percentage of respondents cheating to some degree in each of the scenarios was as follows charitable contribution scenario 38%, business deduction scenario 73%, tip scenario 66%

Future Research Directions

The results of this research beg the question of whether fairness is a relevant issue for future tax research. The answer to this question is yes and no. Yes, fairness is an important policy issue. However, when compared to other influences on taxpayers' behavior, it is not a primary determinant of taxpayers' compliance choices.

In addition to fairness not influencing their behavior, the participants in this study also did not appear to make objective fairness assessments. This does not mean however that policymakers should be unconcerned about fairness. To the contrary, it is even more incumbent on policymakers to make sure the tax system is fair, since it appears that taxpayers themselves will not be able to reach an objective consensus. It is vital that policy makers have a clear vision of what criteria they are using to assess the fairness of various alternatives. Future tax research can both help identify appropriate criteria, and assess how effective the various policy alternatives are at meeting the criteria.

In the first study a distinction was made between individuals whose attitudes were motivated by a desire to express their core beliefs, and individuals whose attitudes were motivated by how they benefited from the attitude object. Additionally, individuals who were motivated by both of these factors were considered to have complex attitude functions. It is likely that most individuals' attitudes toward the tax system serve a complex function. If this is true, it may be possible to prime the value-expressive function and obtain a more objective assessment of fairness. This would be an interesting research objective if a deep understanding of how policy objectives can affect fairness is of interest.

There are also some potentially important influences on fairness that were not studied in this dissertation and are worthy of consideration Some important features of the tax environment that were held constant in this research include the Internal Revenue Service the political system that creates the tax rules, and the level of government spending It would be interesting to know how these features of the tax system influence not only individuals judgments of fairness, but also their behavior The level of government spending seemed to be a particularly hot topic with respondents. It may have a dominant effect on their fairness judgments that was not brought out by the first study because it was not varied between the two tax systems A future research direction is to assess the influence of these factors on taxpayers' fairness judgments

One way of assessing whether taxpayers' attitudes about the federal government are important to their fairness judgments would be to compare different types of tax systems and different tax jurisdictions A comparison of an income tax with a sales tax or property tax, or the comparison of a federal tax with a state or local tax might be of interest. This could address the question of whether there is dissatisfaction with the federal government that influences fairness judgments

The results of the research reported here suggest that perceptions of unfairness are not particularly useful in explaining taxpayers' compliance choices This result appears quite robust across the three scenarios that were investigated There are however a number of other potentially important constructs that bear further investigation The effect of moral obligation was particularly strong and more should be learned about it. For example, what causes taxpayers to have a strong (or weak) moral belief about cheating on taxes? What aspects of the tax system encourage and discourage that belief?

Does the moral effect that appears in this study where intentions are the focus extend to actual behavior? How important are fairness judgments to taxpayers' sense of moral obligation? What effect, if any, do tax advisors have on taxpayers' moral and ethical beliefs? Taxpayers' moral beliefs should offer opportunities for future research

Also intriguing were the results regarding perceived behavioral control Detection systems have been studied previously in tax research. However, the apparent perception on the part of the participants in this study that cheating was relatively easy is interesting A study, which varied the ease with which cheating could be engaged in, would be useful in identifying the relative influence of the other TPB constructs when cheating was difficult. It would also be interesting to study whether the results of this research extend to a setting where behavior is being studied

Lastly, although taxpayers' fairness perceptions were dominated by other factors when making their compliance decisions, it is possible that there are other behaviors where fairness is more influential. One behavior of interest is voting choice. The perceived fairness of the tax system and particularly the perceived fairness of the exchange relationship between the government and the taxpayers may be an important determinant of voting choice The effect of fairness on voting choice would be an interesting subject to investigate

APPENDIX A
FAIRNESS QUESTIONNAIRE

This appendix includes the following items: a table describing which questionnaire items correspond to the model variables the cover letter included with the questionnaire, the complete questionnaire, and alternative tax rate treatment and example treatment.

Table A 1

Information Collected

Section	Data Collected	Variable
Section I	Four specific objectives of a tax system were presented. Subjects were asked to respond to how important each of these objectives is to them.(Questions 1-4)	P
Section II	A brief description of an alternative tax system along with an example of how it would be computed was presented. Subjects were then asked to respond to nine statements. Three of these statements refer to the three (non-simplicity) policies in Section I and ask respondents to indicate which tax system better achieves each policy (Questions 1 3 and 4)	O_i
Section II	Two statements referred to procedural issues regarding the complexity of the tax system. (Questions 2,5)	SIMP
Section II	Three statements asked the respondents about their desired level of complexity and the perceived complexity of the current and alternative tax systems (Questions 6-8)	exploratory
Section III	One question asked whether they thought they would pay more or less than they do now with the alternative tax system.(Question 9)	F_a
Section III	They were asked two questions about how much they would pay in tax compared to others under the current system and under the alternative system. (Questions 1,2)	F
Section III	They were asked five questions about the level of government spending and the incidence of business taxes. (Questions 3 7)	exploratory
Section IV	They were asked to rate how true a series of six questions were of them. These questions are designed to assess the function served by the respondents' attitude toward tax	AF
Section V	Three questions are asked about the fairness of the current tax system and the alternative tax system (Questions 1,2,5)	$I_{F1} - I_{F3}$
Section V	Two questions are asked about the relationship between complexity fairness and compliance (Questions 3 4)	exploratory
Section VI	Demographic information is collected.	exploratory

October 21, 1996

Participant Name
Participant Street Address
Participant City State

Dear Participant

Recently, many politicians, as well as interested citizens, have called for a change in the federal income tax system However, little specific information is known about what individual taxpayers think about the current system For this reason, the University of Florida is conducting research to learn more about what people like you think about taxes. The enclosed questionnaire asks about your opinions on tax issues and potential changes in the tax system It will take you about 10 minutes to complete the entire questionnaire

Your household is one of a small number being asked to give their opinions on these matters. You were chosen in a random sample of the entire country Although participation is voluntary, for the results to truly represent the thinking of the people of the United States it is important that each questionnaire be completed and returned It is best if the questionnaire is completed by the family member who completes your family s annual tax return. If your return is prepared by someone else (for example a CPA or H&R Block), then the family member who works with the tax preparer should answer the questionnaire

All of your answers are confidential to the extent provided by law The questionnaire has an identification number for mailing purposes only Your name will never be placed on the questionnaire and the names of the individuals participating in this study will not be released to anyone You may receive a summary of results by writing "copy of results requested" on the back of the enclosed stamped return envelope and printing your name and address below it. Please do not put this information on the questionnaire itself

If you have any questions or concerns about this questionnaire please feel free to contact me personally at the address noted at the top of this letter or by calling me at (352) 392-0155 Questions or concerns about the research participants rights can be directed to the UFIRB office PO Box 112250 University of Florida, Gainesville FL, 32611-2250 Again thank you very much for taking the time to respond

Sincerely

Donna Bobek
Project Director

WHAT DO YOU THINK ABOUT FEDERAL INCOME TAXES?

•Research Sponsor
•Donna Bobek
•Fisher School of Accounting
•University of Florida
•Gainesville, Florida 32611

Section I

Do you think it is important that our federal tax system be used to accomplish the following goals? Circle a number to show how important you think each is.

How important is it that our tax system is designed to ...									
Achieve social goals:									
like help low income families encourage home ownership encourage charitable giving redistribute wealth etc.?	VERY IMPORTANT	1	2	3	4	5	6	7	NOT IMPORTANT AT ALL
Be as simple as possible?	VERY IMPORTANT	1	2	3	4	5	6	7	NOT IMPORTANT AT ALL
Achieve economic goals:									
like help create investment by business encourage savings and investment by individuals etc?	VERY IMPORTANT	1	2	3	4	5	6	7	NOT IMPORTANT AT ALL
just raise enough money to run the government (without trying to achieve social and economic objectives)?	VERY IMPORTANT	1	2	3	4	5	6	7	NOT IMPORTANT AT ALL

Section D

Some people think a simpler tax system might be better. One simpler system is described below. We'll call this system: Tax System A. Tax System A would collect about the same amount of money as the current income tax system. However: in general, with Tax System A, most individuals would pay less in federal income tax than with the current system, but most businesses would pay more.

- *With Tax System A individuals will pay a 20% tax on their salary, wages, and money received from pensions.*
- *Businesses (both corporations and small businesses) will also pay a 20% tax on net business income. Net business income is total receipts less total expenses.*
- *Other sources of income including interest income, dividend income and capital gains are not taxed no matter if received by an individual or a business.*
- *All itemized deductions (home mortgage interest, state and local taxes, charitable deductions, medical expenses, etc.) and tax credits (childcare credit, earned income credit, etc..) will be eliminated. Instead there will be a personal allowance.*

An example of how one family's tax return would look using Tax System A is on the next page.

Example of Tax System A Tax Return

Jim and Mary Johnson are both employed full-time. In 1995 Jim received wages of $33,000 and Mary received wages of $26,000. They had $7,000 of interest income. They have 2 children and during 1995 they paid $8,000 in interest on their home mortgage and $4,000 in state and local taxes. **Using Tax System A their income tax would be computed as follows and only this form would be filed.**

TAX SYSTEM A TAX RETURN	
1. Wages, salary and distributions from pensions	$59,000
2. Personal Allowance (choose the same one you claim with the current system) (a) $20,000 for married filing joint (b) $14,000 for head of household (c) $10,000 for single	$20,000
3. Personal allowance for Dependents Number of Dependents: not including you or your spouse 2 times $5,000	$10,000
4. Total personal allowance (line 2 plus line 3)	$30,000
5. Taxable Compensation (line 1 less line 4)	$29,000
6. Net Business Income (from a business you own, this can be less than 0 if you had a loss)	$0
7. Total Taxable Income (line 5 plus line 6, but not less than 0)	$29,000
8. Tax (20% of line 7)	$5,800

To help you compare Tax System A with our current system with our current system the Johnson's would have completed three tax forms: 1) Form 1040(2) Schedule A for itemized deductions; and 3) Schedule B for interest income, and they would have paid $5,859 in federal income taxes for 1995. With Tax System A, however they would have filed only the tax form shown above and would have paid $5,800 in federal income tax.

Section II (cont.)

Although you may not think you know enough to be sure based on what you do know about the current tax system and Tax System A, please circle a number to indicate which tax system you <u>think</u> would best accomplish each of the following items (1 means you think Tax System A would accomplish the objective much better than the current system 7 means you think the Current System accomplishes the objective much better than Tax System A would, and 4 means either you think they accomplish it about the same or you have no idea which system would accomplish it better)

1 Helps achieve social goals (like charitable giving home ownership etc.)

ACHIEVED MUCH BETTER BY TAX SYSTEM A	1	2	3	4	5	6	7	ACHIEVED MUCH BETTER BY CURRENT SYSTEM

2 Has few loopholes for individuals and businesses to use to avoid paying taxes

ACHIEVED MUCH BETTER BY TAX SYSTEM A	1	2	3	4	5	6	7	ACHIEVED MUCH BETTER BY CURRENT SYSTEM

3 Raises enough money to run the government but does not try to achieve alot of other goals

ACHIEVED MUCH BETTER BY TAX SYSTEM A	1	2	3	4	5	6	7	ACHIEVED MUCH BETTER BY CURRENT SYSTEM

4 Helps achieve economic goals (like encouraging savings and investment by individuals noting job creation by businesses etc.)

ACHIEVED MUCH BETTER BY TAX SYSTEM A	1	2	3	4	5	6	7	ACHIEVED MUCH BETTER BY CURRENT SYSTEM

5 Requires least amount of effort to determine tax due and complete required tax forms

ACHIEVED MUCH BETTER BY TAX SYSTEM A	1	2	3	4	5	6	7	ACHIEVED MUCH BETTER BY CURRENT SYSTEM

Section II (cont.)

6. In general In order for a tax system to achieve all of things that are important to you how complex do you think it needs to be?

VERY SIMPLE	1	2	3	4	5	6	7	VERY COMPLEX

7 How complex do you think the current tax system is?

VERY SIMPLE	1	2	3	4	5	6	7	VERY COMPLEX

8. How complex do you think Tax System A is?

VERY SIMPLE	1	2	3	4	5	6	7	VERY COMPLEX

9 Based on what you know about Tax System A do you think you would pay more or less with Tax System A than you pay with our current federal income tax system (feel free to use the example computation on the third page of this questionnaire to estimate your own tax with tax system A)?

Check the correct statement below

_____ **I think I would pay MORE under Tax System A than under our current system.**

_____ **I think I would pay LESS under Tax System A than under our current system**

_____ **I think I would pay the SAME with either Tax System A or our current system**

Section III

Please respond to the following statements by circling a number to show your agreement or disagreement with each statement or to show what you think about the amount of taxes you pay or the amount of money the government spends

1 Compared to other people the amount of federal income tax that I currently pay is

MUCH TOO LOW	1	2	3	4	5	6	7	MUCH TOO HIGH

2 Compared to other people the amount of tax that I would pay under Tax System A is

MUCH TOO LOW	1	2	3	4	5	6	7	MUCH TOO HIGH

3 I think it is better for taxes to be higher on businesses and lower on individuals

STRONGLY AGREE	1	2	3	4	5	6	7	STRONGLY DISAGREE

4 Taxes on businesses only affect the owners of the business not its customers or workers

STRONGLY AGREE	1	2	3	4	5	6	7	STRONGLY DISAGREE

5 I would be willing to pay more taxes in order to reduce the federal budget deficit.

STRONGLY AGREE	1	2	3	4	5	6	7	STRONGLY DISAGREE

6 I think the federal government should reduce the budget deficit by spending money more efficiently rather than taxing more

STRONGLY AGREE	1	2	3	4	5	6	7	STRONGLY DISAGREE

7 In general I think the federal government currently spends.

WAY TOO LITTLE	1	2	3	4	5	6	7	WAY TOO MUCH

Section IV

The following statements describe ways that you might think about the [illegible] taxes. **Please circle a number to about how true you believe each of the statements is.**

1.My opinions about tax fairness are influenced by how much I pay compared to how much other people pay

VERY TRUE	1	2	3	4	5	6	7	NOT TRUE AT ALL

2.On the first page of this questionnaire I rated how important I thought it was that the tax system is designed to achieve various objectives. My opinions about tax fairness are influenced by whether or not the tax system achieves the objectives that are important to me

VERY TRUE	1	2	3	4	5	6	7	NOT TRUE AT ALL

3 My opinions about tax fairness are influenced by my concerns about the federal budget deficit

VERY TRUE	1	2	3	4	5	6	7	NOT TRUE AT ALL

4 My opinions about tax fairness are influenced by how much I pay in taxes compared to what services and benefits I personally get from the government in return

VERY TRUE	1	2	3	4	5	6	7	NOT TRUE AT ALL

5.My opinions about tax fairness are similar to the opinions of people I respect

VERY TRUE	1	2	3	4	5	6	7	NOT TRUE AT ALL

6 My opinions about tax fairness are influenced by how much time and effort is required of me in dealing with tax matters

VERY TRUE	1	2	3	4	5	6	7	NOT TRUE AT ALL

Section V

This section indicates statements about how fair you think the tax system is and how complex rules might affect people's ability to correctly file their tax return. **Please circle a number to show your agreement or disagreement with each statement.**

1 In general I think the current United States Federal Income Tax system is fair

STRONGLY AGREE	1	2	3	4	5	6	7	STRONGLY DISAGREE

2 In general I think Tax System A would be fair

STRONGLY AGREE	1	2	3	4	5	6	7	STRONGLY DISAGREE

3 If the rules were not so complicated many people would try harder to fill out their tax return correctly

STRONGLY AGREE	1	2	3	4	5	6	7	STRONGLY DISAGREE

4 I understand why some people purposely cheat on their taxes when they think the rules are unfair

STRONGLY AGREE	1	2	3	4	5	6	7	STRONGLY DISAGREE

5 Compared to each other which tax system is the most fair? **circle a number to show which system you think is fairer**

TAX SYSTEM A IS MUCH FAIRER	1	2	3	4	5	6	7	CURRENT TAX SYSTEM IS MUCH FAIRER

Section VI

In this last section of the questionnaire please answer some questions about yourself to help me interpret the results

1 Your gender (Circle number of your answer)

1) MALE
2) FEMALE

2. Your present age _____ years

3 Do you usually itemize deductions (prepare Schedule A) when you prepare your tax return? (circle number)

1) YES
2) NO

4 Who usually prepares your tax return? (circle number)

1) I DO
2) MY SPOUSE
3) PAID PREPARER (H&R Block, CPA, etc.)
4) OTHER (Please specify) _____

5 Please circle a number to show what you mainly consider when deciding whether a tax system is fair or not.

OBJECTIVES ACHIEVED BY TAX SYSTEM	1	2	3	4	5	6	7	FINANCIAL EFFECT ON ME PERSONALLY

6. What is the highest level of education that you have completed? (circle number)

1) LESS THAN HIGH SCHOOL
2) HIGH SCHOOL
3) SOME COLLEGE
4) BACHELORS DEGREE
5) MASTERS DEGREE
6) OTHER ADVANCED DEGREE

Section VI (cont.)

7 Which of these best describes your usual stand on economic issues? (circle number)

1) LIBERAL
2) MODERATE
3) CONSERVATIVE

8 Please circle the number next to the phrase that best describes your current employment status

1) EMPLOYED – FULL TIME
2) EMPLOYED – PART TIME
3) UNEMPLOYED – NON-STUDENT
4) UNEMPLOYED-STUDENT
5) EMPLOYED-STUDENT
6) RETIRED

9 Please circle a number to indicate your annual household income

1) UNDER $20,000
2) $20,001-$50,000
3) $50,001-$75,000
4) OVER $75,000

10 Please describe your usual occupation. (If retired, describe your usual occupation before retirement.)

TITLE _____

KIND OF WORK YOU DO: _____

KIND OF BUSINESS _____

Thank you very much for taking the time to complete this questionnaire. If you would like to write down anything else that might be useful in understanding your opinions about federal income taxes please feel free to write on the back cover of this questionnaire. Additionally, remember, if you would like a summary of the results of this study, write "copy of results" and your name and address on the back of the stamped return envelope that you use to return this questionnaire.

Your contribution to this effort is greatly appreciated. If you would like a summary of the results, please print your name and address on the back of the return envelope (NOT on the questionnaire). Thank you again for taking the time to respond.

Alternative Rate Schedule

Section II

Some people think a simpler tax system might be better One simpler system is described below We'll call this system, Tax System A Tax System A would collect about the same amount of money as the current income tax system. However, in general, with Tax System A most individuals would pay less in federal income tax than with the current system but most businesses would pay more

- ***With Tax System A individuals will pay a 25% tax on their salary, wages and money received from pensions.***
- ***Businesses (both corporations and small businesses) will also pay a 25% tax on net business income. Net business income is total receipts less total expenses.***
- ***Other sources of income including interest income, dividend income and capital gains are not taxed no matter if received by an individual or a business***
- ***All itemized deductions (home mortgage interest, state and local taxes, charitable deductions, medical expenses, etc..) and tax credits (childcare credit, earned income credit, etc..) will be eliminated. Instead there will be a personal allowance.***

An example of how one family's tax return would look using Tax System A is on the next page

Alternative Example #1

Example of Tax System A Tax Return

Jim and Mary Johnson are both employed full time. In 1995, Jim received wages of $33,000 and Mary received wages of $26,000. They had $2,000 of interest income. They have 2 children, and during 1995, they paid $8,000 in interest on their home mortgage and $4,000 in state and local taxes. **Using Tax System A their income tax would be computed as follows and only this form would be filed:**

TAX SYSTEM A TAX RETURN	
1. Wages, salary and distributions from pensions	$59,000
2. Personal Allowance (choose the same one you claim with the current system) (a)$20,000 for married filing joint (b) $14,000 for head of household (c) $10,000 for single	$20,000
3. Personal allowance for Dependents Number of Dependents, not including you or your spouse, 2 times $5,000	$10,000
4. Total personal allowance (line 2 plus line 3)	$30,000
5. Taxable Compensation (line 1 less line 4)	$29,000
6. Net Business Income (from a business you own, this can be less than 0 if you had a loss)	$0
7. Total Taxable Income (line 5 plus line 6, but not less than 0)	$29,000
8. Tax (25% of line 7)	$7,250

To help you compare Tax System A with our current system· with our current system, the Johnson's would have completed three tax forms: 1) Form 1040, 2) Schedule A, for itemized deductions; and 3) Schedule B, for interest income, and they would have paid $5,850 in federal income taxes for 1995. With Tax System A, however, they would have filed only the tax form shown above and would have paid $7,250 in federal income tax.

Alternative Example #2

Example of Tax System A Tax Return

Mary Johnson, a widow is employed full time In 1995 Mary received wages of $22,000 She and her teenage son live in an apartment she rents Under the current tax system Mary qualifies for the earned income credit. **Using Tax System A her income tax would be computed as follows and only this form would be filed**

TAX SYSTEM A TAX RETURN	
1 Wages, salary and distributions from pensions	$22,000
2. Personal Allowance (choose the same one you claim with the current system) (a)$20,000 for married filing joint (b) $14,000 for head of household (c) $10,000 for single	$14,000
3. Personal allowance for Dependents. Number of Dependents, not including you or your spouse, 1 times $5,000	$5 000
4 Total personal allowance (line 2 plus line 3)	$19 000
5. Taxable Compensation (line 1 less line 4)	$3,000
6 Net Business Income (from a business you own, this can be less than 0 if you had a loss)	$0
7 Total Taxable Income (line 5 plus line 6, but not less than 0)	$3,000
8. Tax (25% of line 7)	$750

To help you compare Tax System A with our current system with our current system Ms Johnson would have completed two tax forms 1) Form 1040A, and 2) Schedule EIC, for the earned income credit; and she would have paid $1,301 in federal income taxes for 1995.. With Tax System A, however, she would have filed only the tax form shown above and would have paid $750 in federal income tax.

Alternative Example #3

Example of Tax System A Tax Return

Mary Johnson, a widow is employed full-time In 1995, Mary received wages of $22,000 She and her teenage son live in an apartment she rents Under the current tax system, Mary qualifies for the earned income credit **Using Tax System A her income tax would be computed as follows and only this form would be filed:**

TAX SYSTEM A TAX RETURN	
1 Wages, salary and distributions from pensions	$22,000
2 Personal Allowance (choose the same one you claim with the current system) **(a) $20,000 for married filing joint** **(b) $14,000 for head of household** **(c) $10 000 for single**	$14,000
3 Personal allowance for Dependents. Number of Dependents, not including you or your spouse, 1 times $5 000	$5,000
4 Total personal allowance (line 2 plus line 3)	$19,000
5 Taxable Compensation (line 1 less line 4)	$3,000
6 Net Business Income (from a business you own, this can be less than 0 if you had a loss)	$0
7 Total Taxable Income (line 5 plus line 6, but not less than 0)	$3,000
8 Tax (20% of line 7)	$600

To help you compare Tax System A with our current system with our current system Ms Johnson would have completed two tax forms 1) Form 1040A, and 2) Schedule EIC, for the earned income credit; and she would have paid $1,301 in federal income taxes for 1995. With Tax System A, however, she would have filed only the tax form shown above and would have paid $600 in federal income tax.

APPENDIX B
MEAN RESPONSES TO FAIRNESS QUESTIONNAIRE

Question	Mean	Standard Deviation
Section I		
(RESPONSE SCALE 1="NOT VERY IMPORTANT AT ALL" to 7 ="VERY IMPORTANT")		
How important is it that our tax system		
1) Achieve social goals (like help low income families, encourage home ownership, encourage charitable giving, redistribute wealth, etc.)	4.03	2.08
2) Be as simple as possible	6 11	1.24
3) Achieve economic goals (like help create new investment by business, encourage savings and investment by individuals etc)	5.28	1 84
4) Just raise enough money to run the government (without trying to achieve social and economic goals).	4.21	2 09
Section II		
(RESPONSE SCALE +3="ACHIEVED MUCH BETTER BY TAX SYSTEM A" to 3="ACHIEVED MUCH BETTER BY CURRENT TAX SYSTEM")		
1) Helps achieve social goals	12	2 10
2) Has few loopholes for individuals and businesses to use to avoid paying taxes.	1 74	1 71
3) Raises enough money to run the government, but does not try to achieve a lot of other goals	95	1 69
4) Helps achieve economic goals	86	1 88
5) Requires least amount of effort to determine tax due and complete required tax forms	2 28	1 35
(RESPONSE SCALE 1 ="VERY SIMPLE" to 7="VERY COMPLEX")		
6) In general, in order for a tax system to achieve all of the things that are important to you, how complex do you think it needs to be?	2.08	1 47
7) How complex do you think the current tax system is?	5 94	1 36
8) How complex do you think Tax System A is?	1 9	1 37

Question	Mean	Standard Deviation
Section II (cont).		
9) Based on what you know about Tax System A do you think you would pay more or less with Tax System A than you pay with our current federal income tax system? PERCENTAGE RESPONDING TO EACH OF THE FOLLOWING CHOICES		
I think I would pay MORE under Tax System A	33%	
I think I would pay LESS under Tax System A	45%	
I think I would pay the SAME with either Tax System A or the current system.	22%	
Section III (RESPONSE SCALE 1 ="MUCH TOO LOW" to 7="MUCH TOO HIGH")		
1) Compared to other people, the amount of federal income tax I currently pay is	5.14	1.26
2) Compared to other people, the amount of federal income tax I would pay under Tax System A is	4.41	1.27
(RESPONSE SCALE. 1 ="STRONGLY AGREE" to 7="STRONGLY DISAGREE")		
3) I think it is better for taxes to be higher on businesses and lower on individuals	3.98	1.93
4) Taxes on business only affect the owners of the business, not its customers or workers	6.01	1.58
5) I would be willing to pay more taxes in order to reduce the federal budget deficit	5.17	1.92
6) I think the federal government should reduce the budget deficit by spending money more efficiently rather than taking me more.	1.43	1.25
(RESPONSE SCALE 1="WAY TOO LITTLE" to 7="WAY TOO MUCH")		
7) In general, I think the federal government currently spends.	6.42	1.03
Section IV (RESPONSE SCALE (Q 1, 4, 6) +3="VERY TRUE" to 3="NOT TRUE AT ALL" (Q 2, 3, 5) 3 = "VERY TRUE" to +3="NOT TRUE AT ALL")		
1) My opinions about tax fairness are influenced by how much I pay compared to how much other people pay	0.09	2.03
2) My opinions about tax fairness are influenced by whether or not the tax system achieves the objectives that are important to me	.85	1.68

Question	Mean	Standard Deviation
Section IV (cont.)		
3) My opinions about tax fairness are influenced by my concerns about the federal budget deficit	.22	1 97
4) My opinions about tax fairness are influenced by how much I pay in taxes compared to what services and benefits I personally get from the government in return.	.09	2 13
5) My opinions about tax fairness are similar to the opinions of people I respect	.36	1 95
6) My opinions about tax fairness are influenced by how much time and effort is required of me in dealing with tax matters.	08	1 91
Section V		
(RESPONSE SCALE 1="STRONGLY DISAGREE" to 7="STRONGLY AGREE")		
1) In general, I think the current United States Federal Income Tax system is fair	2 51	1 65
2) In general, I think Tax System A would be fair	4 75	1 74
(RESPONSE SCALE. 1="STRONGLY AGREE" to 7="STRONGLY DISAGREE")		
3) If the rules were not so complicated, many people would try harder to fill out their tax return correctly	2.89	1 90
4) I understand why some people purposely cheat on their taxes when they think the rules are unfair	4.12	2.16
(RESPONSE SCALE. 4="TAX SYSTEM A IS MUCH FAIRER" to 3="CURRENT TAX SYSTEM IS MUCH FAIRER")		
5) Compared to each other, which tax system is the most fair?	1 03	1 56

APPENDIX C
COMPLIANCE QUESTIONNAIRE

This appendix includes two of the six versions of the questionnaire that were used. The two versions include all three of the scenarios that were used. The first questionnaire includes the charitable contribution scenario and the tip scenario. The second questionnaire includes the tip scenario and the business deduction scenario. The questionnaires were organized into three parts.

- Part I: subjects read a short paragraph describing a tax "scenario", they were then asked 7 questions about that scenario. Next they read a second scenario, and were ask 7 similar questions about the second scenario.
- Part II: After reading the second scenario, they were asked 20 questions designed to collect the belief measures that corresponded to their attitude (H_3).
- Part III: On the last two pages of the questionnaire, demographic information was collected as well as global measures of the constructs measured in Part I.

The following discussion identifies which variables are collected by each of the questions.

Attitude Determinant Hypotheses (H_3)

Recall that these hypotheses were tested based on the following regression equation:

$$A_C = \alpha + \beta_1 T + \beta_2 J + \beta_3 G + \beta_4 P + \beta_5 F$$

where A_C = *attitude toward cheating*
T = *tax paid belief*
J = *illegal behavior belief*
G = *guilt belief*
P = *penalty belief*
F = *fairness belief*

Further, each belief variable in the above equation is the product of an evaluation score (e_i) and a perceived likelihood score (b_i).[1] The following table identifies which item from the instrument is used to collect the variables. Note that each of these variables is collected for each scenario.

Table C-1
Questionnaire Items
Attitude Determinant Hypothesis

Description	Questionnaire Section/Question Number	Variable
Perceived Likelihood Score:		
Guilt	Part II/Question 1	b_i Values
Tax Paid	Part II/Question 5	
Penalty	Part II/Question 9	
Fairness	Part II/Question 13	
Illegal	Part II/Question 17	
Evaluation Scores		
Guilt	Part II/Question 3	e_i Values
Tax Paid	Part II/Question 7	
Penalty	Part II/Question 11	
Fairness	Part II/Question 15	
Illegal	Part II/Question 19	
Dependent Variable		
Attitude Toward Cheating	Part I/Question 6	A_c

[1] For example, the Tax Paid Belief variable in the above equation is computed by multiplying subjects response to the statement "I would be pleased if, in the end result, I paid less taxes because ___" (evaluative score) by their response to the statement, "In the end result (after considering any potential future IRS action), I think I would pay less taxes if I ___" (perceived likelihood score).

Compliance Hypotheses (H_1 and H_2)

Recall that these hypotheses were tested using the following regression equation

$$CI = \alpha + \beta_1 A_c + \beta_2 SN + \beta_3 PBC + \beta_4 MO + \beta_5 A_c * PBC + \beta_6 SN * PBC + \beta_7 MO * PBC$$

where CI = cheating intentions
A_c = attitude toward cheating
SN = subjective norms
PBC = perceived behavioral control
MO = moral obligation

The following table identifies each of the instrument items that were used to collect these variables. Also reported in the table are the additional fairness measures that were used in the analysis.

Table C-2
Questionnaire Items
Compliance Hypotheses

Description	Questionnaire Section/Question Number	Variable
Attitude Toward Cheating	Part I/Question 6	A_c
Subjective Norms	Part I/Question 2	SN
Perceived Behavioral Control	Part I/Questions 3 and 4*	PBC
Moral Obligation	Part I/Question 5	MO
Dependent Variable Cheating Intention	Part I/Question 1	CI
Rule Fairness	Part I/Question 7	Rule Fairness
Tax System Fairness	Part III/Question 1	Tax System Fairness
Fairness of Amount Paid	Part III/Question 2	Amount Pay Fairness

*The variable PBC was the average of the subjects' responses to these two questions

AN INVESTIGATION INTO TAXPAYERS' DECISION MAKING

This questionnaire includes a description of two different situations that a taxpayer may encounter After reading a short summary of each situation, you will be asked several questions regarding what you would do if you were in that situation and your opinions about a variety of factors regarding the particular situation. Please answer each question thoughtfully Your responses will be kept completely confidential

Situation One

It is April 15 1997 and Jane Smith is filling out her 1996 federal income tax return She is filing Form 1040 and using Schedule A to itemize her deductions Jane is sure that during 1996 she contributed $1 100 to her favorite charity but she cannot find any record of this contribution The IRS requires that a taxpayer have written acknowledgment from the charitable organization for any cash donation over $250 Jane moved during 1996 and she lost the box that contained her cancelled checks and tax receipts Even if she had more time, Jane doesn't think she could get documentation from the charity without her cancelled check.

1 If it were you, how much (if any) of this contribution would you include on your tax return as a charitable deduction?

ENTER DOLLAR AMOUNT HERE _____

In answering the following questions you will respond to a rating scale with seven places, please make a check mark in the middle of the space which best describes your opinion

2 Most people I know would approve of me taking $1 100 as a charitable deduction.

DISAGREE_____:_____:_____:_____:_____:_____:_____ **AGREE**

strongly somewhat slightly neither slightly somewhat strongly

3 If I took a $1 100 deduction for this contribution on my tax return I would be audited.

LIKELY_____:_____:_____:_____:_____:_____:_____ **UNLIKELY**

extremely quite slightly not sure slightly quite extremely

4 If my tax return were audited the IRS would discover that I took a $1 100 deduction for this contribution without appropriate documentation

LIKELY_____:_____:_____:_____:_____:_____:_____ **UNLIKELY**
extremely quite slightly not sure slightly quite extremely

5 I think it would be morally wrong for me to take $1 100 for this deduction on my tax return

DISAGREE_____:_____:_____:_____:_____:_____:_____ **AGREE**
strongly somewhat slightly neither slightly somewhat strongly

6 In general, my taking $1 100 for this deduction would be

GOOD_____:_____:_____:_____:_____:_____:_____ **BAD**
extremely quite slightly neither slightly quite extremely

7 I think the IRS requiring written acknowledgment for charitable contributions greater than $250 is

UNFAIR_____:_____:_____:_____:_____:_____:_____ **FAIR**
extremely quite slightly neither slightly quite extremely

Situation Two

John Jones is a full-time college student He works an average of 20 hours per week as a waiter in a local restaurant to help pay for his living expenses His income consists of an hourly wage paid by his employer plus the tips he receives from customers According to the tax law both the wages and all the tips are subject to federal income tax and social security tax (whether or not they are reported to the IRS by the employer) At the restaurant where he works, the employees must report the tips they receive on their time card each pay-period so that their employer can withhold taxes on the full amount of income and report the wages and tips to the IRS John's W-2 for 1996 showed wages and tips of $10 000 He estimates that he earned at least $3 000 more in tips that he did not report to his employer and therefore were not reported to the IRS

1 If you were John, how much (if any) of the $3,000 unreported tips would you include on your 1996 tax return?

ENTER DOLLAR AMOUNT HERE _____.

In answering the following questions you will respond to a rating scale with seven places, please make a check mark in the middle of the space which best describes your opinion

2 Most people I know would approve of me excluding the $3 000 of tips from my income for tax purposes

DISAGREE_____:_____:_____:_____:_____:_____:_____ **AGREE**

strongly somewhat slightly neither slightly somewhat strongly

3 If I excluded the $3 000 from my income on my tax return, I think my tax return would be audited

LIKELY_____:_____:_____:_____:_____:_____:_____ **UNLIKELY**

extremely quite slightly not sure slightly quite extremely

4 If my tax return were audited, I think the IRS would discover that I had understated my income by $3,000

LIKELY_____:_____:_____:_____:_____:_____:_____ **UNLIKELY**

extremely quite slightly not sure slightly quite extremely

5 I think it would be morally wrong for me not to report all of the tips I received on my tax return

DISAGREE_____:_____:_____:_____:_____:_____:_____ **AGREE**

strongly somewhat slightly neither slightly somewhat strongly

6 In general, understating the tips I received on my tax return would be

GOOD_____:_____:_____:_____:_____:_____:_____ **BAD**

extremely quite slightly neither slightly quite extremely

7 Tips being subject to the same tax treatment as other wages is

UNFAIR_____:_____:_____:_____:_____:_____:_____ **FAIR**

extremely quite slightly neither slightly quite extremely

In this section of the questionnaire, you are asked to respond to a set of questions that refer to the two situations that you just read. In the following questions Situation One refers to the charitable deduction situation, and Situation Two refers to the tip situation. As before, in answering the following questions you will respond to a rating scale with seven places, please make a check mark in the middle of the space which best describes your opinion

1. I would feel guilty if I took $1,100 as a charitable deduction on my tax return in Situation One

LIKELY_____:_____:_____:_____:_____:_____:_____ **UNLIKELY**

extremely quite slightly not sure slightly quite extremely

2. I would feel guilty if I excluded the $3,000 of tips from my income tax return in Situation Two

LIKELY_____:_____:_____:_____:_____:_____:_____ **UNLIKELY**

extremely quite slightly not sure slightly quite extremely

3. If I knew taking $1,100 as a charitable deduction on my tax return in Situation One would make me feel guilty, I wouldn't do it

AGREE_____:_____:_____:_____:_____:_____:_____ **DISAGREE**

strongly somewhat slightly neither slightly somewhat strongly

4. If I knew excluding $3,000 from my income in Situation Two would make me feel guilty, I wouldn't do it

AGREE_____:_____:_____:_____:_____:_____:_____ **DISAGREE**

strongly somewhat slightly neither slightly somewhat strongly

5. In the end result (after considering any potential future IRS action), I think I would pay less taxes if I took $1,100 as a charitable deduction in Situation One (as opposed to not deducting the contribution)

LIKELY_____:_____:_____:_____:_____:_____:_____ **UNLIKELY**

extremely quite slightly not sure slightly quite extremely

6 In the end result (after considering any potential future IRS action) I think it would pay less taxes if I excluded the $3 000 of tips from my income in Situation Two (as opposed to including them in my income)

LIKELY_____:_____:_____:_____:_____:_____:_____ **UNLIKELY**
extremely quite slightly not sure slightly quite extremely

7 I would be pleased if, in the end result, I paid less taxes because I deducted $1 100 as a charitable contribution in Situation One

AGREE_____:_____:_____:_____:_____:_____:_____ **DISAGREE**
strongly somewhat slightly neither slightly somewhat strongly

8 I would be pleased if, in the end result I paid less taxes because I excluded $3 000 of tips from my income in Situation Two

AGREE_____:_____:_____:_____:_____:_____:_____ **DISAGREE**
strongly somewhat slightly neither slightly somewhat strongly

9 I think I would incur some penalty (fines interest embarrassment) if I took $1 100 as a charitable deduction in Situation One

LIKELY_____:_____:_____:_____:_____:_____:_____ **UNLIKELY**
extremely quite slightly not sure slightly quite extremely

10 I think I would incur some penalty (fines interest, embarrassment) in Situation Two if I didn't report all of my tips as income on my tax return

LIKELY_____:_____:_____:_____:_____:_____:_____ **UNLIKELY**
extremely quite slightly not sure slightly quite extremely

11 I would be unhappy if I incurred a penalty for taking $1-100 as a charitable deduction in Situation One

AGREE_____:_____:_____:_____:_____:_____:_____ **DISAGREE**
strongly somewhat slightly neither slightly somewhat strongly

12. I would be unhappy if I incurred a penalty in Situation Two for understating the amount of tips I received

AGREE_____:_____:_____:_____:_____:_____:_____ **DISAGREE**
strongly somewhat slightly neither slightly somewhat strongly

13. By taking $1,100 as a charitable deduction in Situation One, I think I would pay a <u>fairer</u> amount of tax

LIKELY_____:_____:_____:_____:_____:_____:_____ **UNLIKELY**
extremely quite slightly not sure slightly quite extremely

14. By excluding the $3,000 of tips from your income in Situation Two, I think I would pay a <u>fairer</u> amount of tax

LIKELY_____:_____:_____:_____:_____:_____:_____ **UNLIKELY**
extremely quite slightly not sure slightly quite extremely

15. If I <u>could</u> pay a fairer amount of tax by deducting the $1,100 charitable contribution in Situation One, I would be pleased

AGREE_____:_____:_____:_____:_____:_____:_____ **DISAGREE**
strongly somewhat slightly neither slightly somewhat strongly

16. If I <u>could</u> pay a fairer amount of tax by excluding the $3,000 of tips from my income in Situation Two, I would be pleased

AGREE_____:_____:_____:_____:_____:_____:_____ **DISAGREE**
strongly somewhat slightly neither slightly somewhat strongly

17. I would consider it illegal if I deducted $1,100 as a charitable deduction in Situation One

AGREE_____:_____:_____:_____:_____:_____:_____ **DISAGREE**
strongly somewhat slightly neither slightly somewhat strongly

18 I would consider it illegal if I excluded the $3 000 in tips from my income in Situation Two

AGREE_____ _____:_____:_____ _____:_____:_____ **DISAGREE**
strongly somewhat slightly neither slightly somewhat strongly

19 If it is illegal to deduct $1,100 as a charitable contribution in Situation One, I wouldn't like doing it

AGREE_____:_____:_____:_____ _____:_____:_____ **DISAGREE**
strongly somewhat slightly neither slightly somewhat strongly

20 If it is illegal to exclude the $3 000 of tips from my income in Situation Two, I wouldn't like doing it

AGREE_____:_____:_____:_____ _____:_____:_____ **DISAGREE**
strongly somewhat slightly neither slightly somewhat strongly

Please answer some general questions and some questions about yourself to help in interpreting the results

1 In general I rate the fairness of the federal income tax system as

UNFAIR_____:_____:_____:_____:_____:_____:_____ **FAIR**

extremely quite slightly neither slightly quite extremely

2 In general, I rate the fairness of the amount of federal income tax I pay as

UNFAIR_____:_____:_____:_____:_____:_____:_____ **FAIR**

extremely quite slightly neither slightly quite extremely

3 In general, I think most people I know would approve of me estimating deductions "in my favor" or not reporting all of my income to the IRS?

LIKELY_____:_____:_____:_____:_____:_____:_____ **UNLIKELY**

extremely quite slightly not sure slightly quite extremely

4 In general I think it is morally wrong to "cheat" on my taxes, regardless of the situation

AGREE____:____:____:____:____:____:____ **DISAGREE**

strongly somewhat slightly neither slightly somewhat strongly

5 In general I think it would be easy for me to "cheat" on my taxes and get away with it.

AGREE____:____:____:____:____:____:____ **DISAGREE**

strongly somewhat slightly neither slightly somewhat strongly

6 In general, I think cheating on my taxes is

GOOD____:____:____:____:____:____:____ **BAD**

extremely quite slightly neither slightly quite extremely

7 There have been times when preparing my federal income tax return that I have estimated a deduction amount "in my favor"

LIKELY____:____:____:____:____:____:____ **UNLIKELY**

extremely quite slightly not sure slightly quite extremely

8 There have been times when I didn't include income on my tax return because I knew it wasn't reported to the IRS by a third party

LIKELY _____ _____ _____ _____ _____ _____ _____ **UNLIKELY**
extremely quite slightly not sure slightly quite extremely

9 Please rate your familiarity with the situations included in this questionnaire

Situation One (Charitable Deduction Situation)
FAMILIAR _____ _____ _____ _____ _____ _____ _____ **UN-FAMILIAR**
extremely quite slightly neither slightly quite extremely

Situation Two (Tip Situation)
FAMILIAR _____ _____ _____ _____ _____ _____ _____ **UN-FAMILIAR**
extremely quite slightly neither slightly quite extremely

10 My gender

1) MALE
2) FEMALE

11 My present age ____ years

12 Who usually prepares my tax return

1) I DO
2) MY SPOUSE
3) PAID PREPARER (H&R Block, CPA, etc)
4) OTHER (please specify) _____

13 The highest level of education that I have completed

1) LESS THAN HIGH SCHOOL
2) HIGH SCHOOL
3) SOME COLLEGE
4) BACHELORS DEGREE
5) MASTERS DEGREE
6) OTHER ADVANCED DEGREE

14 My family income level (before taxes)

1) UNDER $20 000
2) $20 001 $50 000
3) $50 001-$75 000
4) OVER $75 000

15 Does your regular work involve preparing federal income tax forms or any related tasks?
YES NO

Thank you for completing this questionnaire. Your contribution to this research effort is greatly appreciated. If you would like a summary of the results, write "copy of results" and your name and address on the return envelope. To insure confidentiality, of your responses do not put your name on this questionnaire.

AN INVESTIGATION INTO TAXPAYERS' DECISION MAKING

This questionnaire includes a description of two different situations that a taxpayer may encounter. After reading a short summary of each situation, you will be asked several questions regarding what you would do if you were in that situation and your opinions about a variety of factors regarding the particular situation. Please answer each question thoughtfully. Your responses will be kept completely confidential.

Situation One

John Jones is a full-time college student. He works an average of 20 hours per week as a waiter in a local restaurant to help pay for his living expenses. His income consists of an hourly wage paid by his employer plus the tips he receives from customers. According to the tax law, both the wages and all of the tips are subject to federal income tax and social security tax (whether or not they are reported to the IRS by the employer). At the restaurant where he works, the employees must report the tips they receive on their time card each pay-period so that their employer can withhold taxes on the full amount of income and report the wages and tips to the IRS. John's W-2 for 1996 showed wages and tips of $10,000. He estimates tht he earned at least $$3,000 more in tips that he did not report to his employer and therefore were not reported to the IRS.

1. If you were John, how much (if any) of the $3,000 unreported tips would you include on your 1996 tax return?

ENTER DOLLAR AMOUNT HERE: _____

In answering the following questions you will respond to a rating scale with seven places; please make a check mark in the <u>middle of the space which best describes your opinion</u>.

2. Most people I know would approve of me taking excluding the $3,000 of tips from my income for tax purposes.

DISAGREE_____ _____:_____:_____:_____:_____:_____ **AGREE**

strongly somewhat slightly neither slightly somewhat strongly

3. If I excluded the $3,000 from my income on my tax return, I think my tax return would be audited.

LIKELY_____ _____:_____:_____:_____:_____:_____ **UNLIKELY**

extremely quite slightly not sure slightly quite extremely

4 If my tax return were audited the IRS would discover that I had understated my income by $3 000

LIKELY_____:_____:_____:_____:_____:_____:_____ **UNLIKELY**
extremely quite slightly not sure slightly quite extremely

5 I think it would be morally wrong for me not to report all of the tips I received on my tax return

DISAGREE_____:_____:_____:_____:_____:_____:_____ **AGREE**
strongly somewhat slightly neither slightly somewhat strongly

6 In general,understating the tips I received would be

GOOD_____:_____:_____:_____:_____:_____:_____ **BAD**
extremely quite slightly neither slightly quite extremely

7 Tips being subject to the same tax treatment as other wages is

UNFAIR_____:_____:_____:_____:_____:_____:_____ **FAIR**
extremely quite slightly neither slightly quite extremely

Situation Two

Jim Johnson operates an advertising business out of his home Jim uses a spare bedroom in his home as his office He calls clients prepares advertising bids, does his billing, etc from this office He estimates that the annual cost of maintaining this office in his home is approximately $2 000 Jim's daughter a college student, also lives with him. In the evening she often uses Jim's office computer to do her homework According to the tax law the fact that his daughter uses this office for personal reasons prohibits Jim from being able to deduct the $2 000 as a business expense For 1996 Jim s total revenue from this business is $50 000 and his expenses, not including the home office expense, are $20,000

1 If you were Jim, how much (if any) of the $2,000 home office expense would you deduct on your 1996 tax return?

ENTER DOLLAR AMOUNT HERE:_____

In answering the following questions you will respond to a rating scale with seven places; please make a check mark in the middle of the space which best describes your opinion

2 Most people I know would approve of me deducting the $2 000 home office expense on my tax return

DISAGREE_____:_____:_____:_____:_____:_____:_____ **AGREE**

strongly somewhat slightly neither slightly somewhat strongly

3 If I deducted the $2,000 home office expense on my tax return, I think my tax return would be audited

LIKELY_____:_____:_____:_____:_____:_____:_____ **UNLIKELY**

extremely quite slightly not sure slightly quite extremely

4 If my tax return were audited I think the IRS would discover that I had deducted $2,000 for home office expense even though there was some personal use of the office

LIKELY_____:_____:_____:_____:_____:_____:_____ **UNLIKELY**

extremely quite slightly not sure slightly quite extremely

5 I think it would be morally wrong for me to deduct $2,000 as home office expense in this situation

DISAGREE_____:_____:_____:_____:_____:_____:_____ **AGREE**

strongly somewhat slightly neither slightly somewhat strongly

6 In general my deducting the $2,000 home office expense on my tax return would be

GOOD_____:_____:_____:_____:_____:_____:_____ **BAD**

extremely quite slightly neither slightly quite extremely

7 The IRS prohibiting a taxpayer from deducting the expenses associated with a home office if there is <u>any</u> personal use of the office is

UNFAIR_____:_____:_____:_____:_____:_____:_____ **FAIR**

extremely quite slightly neither slightly quite extremely

In this section of the questionnaire, you are asked to respond to a set of questions that refer to the two situations that you just read. In the following questions Situation One refers to the tip situation, and Situation Two refers to the home office expense situation. As before, in answering the following questions you will respond to a rating scale with seven places, please make a check mark in the middle of the space which best describes your opinion.

1 I would feel guilty if I excluded the $3 000 of tips from my income tax return in Situation One

LIKELY_____:_____:_____:_____:_____:_____:_____ **UNLIKELY**
extremely quite slightly not sure slightly quite extremely

2 I would feel guilty if I deducted the $2,000 home office expense tax return in Situation Two

LIKELY_____:_____:_____:_____:_____:_____:_____ **UNLIKELY**
extremely quite slightly not sure slightly quite extremely

3 If I knew excluding $3 000 from my income in Situation One would make me feel guilty, I wouldn't do it

AGREE_____:_____:_____:_____:_____:_____:_____**DISAGREE**
strongly somewhat slightly neither slightly somewhat strongly

4 If I knew taking $2 000 as a home office expense deduction on my tax return in Situation Two would make me feel guilty I wouldn't do it.

AGREE_____:_____:_____:_____:_____:_____:_____**DISAGREE**
strongly somewhat slightly neither slightly somewhat strongly

5 In the end result (after considering any potential future IRS action) I think I would pay less taxes if I excluded the $3 000 of tips from my income in Situation One (as opposed to including them in my income)

LIKELY_____:_____:_____:_____:_____:_____:_____ **UNLIKELY**
extremely quite slightly not sure slightly quite extremely

6 In the end result (after considering any potential future IRS action), I think I would pay less taxes if I deducted the $2 000 home office expense in Situation Two (as opposed to not deducting the expense)

LIKELY_____:_____:_____:_____:_____:_____:_____ **UNLIKELY**

extremely quite slightly not sure slightly quite extremely

7 I would be pleased if, in the end result, I paid less taxes because I excluded $3,000 of tips from my income in Situation One

AGREE_____:_____:_____:_____:_____:_____:_____**DISAGREE**

strongly somewhat slightly neither slightly somewhat strongly

8 I would be pleased if, in the end result I paid less taxes because I deducted $2,000 for the home office expense in Situation Two

AGREE_____:_____:_____:_____:_____:_____:_____**DISAGREE**

strongly somewhat slightly neither slightly somewhat strongly

9 I think I would incur some penalty (fines, interest, embarrassment) in Situation One, if I didn t report all of my tips as income

LIKELY_____:_____:_____:_____:_____:_____:_____ **UNLIKELY**

extremely quite slightly not sure slightly quite extremely

10 I think I would incur some penalty (fines, interest, embarrassment) if I deducted $2 000 as a home office expense in Situation Two

LIKELY_____:_____:_____:_____:_____:_____:_____ **UNLIKELY**

extremely quite slightly not sure slightly quite extremely

11 I would be unhappy if I incurred a penalty in Situation One for understating the amount of tips I received

AGREE_____:_____:_____:_____:_____:_____:_____**DISAGREE**

strongly somewhat slightly neither slightly somewhat strongly

12 I would be unhappy if I incurred a penalty for deducting the $2 000 home office expense in Situation Two

AGREE_____:_____:_____:_____:_____:_____**DISAGREE**

strongly somewhat slightly neither slightly somewhat strongly

13 By excluding the $3 000 of tips from my income in Situation One, I think I would pay a fairer amount of tax.

LIKELY_____:_____:_____:_____:_____:_____:_____ **UNLIKELY**

extremely quite slightly not sure slightly quite extremely

14 By deducting $2 000 as a home office expense in Situation Two I think I would pay a fairer amount of tax

LIKELY_____:_____:_____:_____:_____:_____:_____ **UNLIKELY**

extremely quite slightly not sure slightly quite extremely

15 If I could pay a fairer amount of tax by excluding the $3 000 of tips from my income in Situation One, I would be pleased

AGREE_____:_____:_____:_____:_____:_____:_____**DISAGREE**

strongly somewhat slightly neither slightly somewhat strongly

16 If I could pay a fairer amount of tax by deducting the $2 000 home office expense in Situation Two I would be pleased

AGREE_____:_____:_____:_____:_____:_____:_____**DISAGREE**

strongly somewhat slightly neither slightly somewhat strongly

17 I would consider it illegal if I excluded the $3 000 in tips from my income in Situation One

AGREE_____:_____:_____:_____:_____:_____:_____**DISAGREE**

strongly somewhat slightly neither slightly somewhat strongly

18 I would consider it illegal if I deducted $2 000 as a home office expense in Situation Two

AGREE_____:_____:_____:_____:_____:_____:_____**DISAGREE**
strongly somewhat slightly neither slightly somewhat strongly

19 If it is illegal to exclude the $3 000 of tips from my income in Situation One I wouldn't like doing it.

AGREE_____:_____:_____:_____:_____:_____:_____**DISAGREE**
strongly somewhat slightly neither slightly somewhat strongly

20 If it is illegal to deduct the $2 000 as a home office expense in Situation Two, I wouldn't like doing it

AGREE_____:_____:_____:_____:_____:_____:_____**DISAGREE**
strongly somewhat slightly neither slightly somewhat strongly

Please answer some general questions and some questions about yourself to help in interpreting the results

1 In general, I rate the fairness of the federal income tax system as

UNFAIR_____:_____:_____:_____:_____:_____:_____ **FAIR**

extremely quite slightly neither slightly quite extremely

2 In general I rate the fairness of the amount of federal income tax I pay as

UNFAIR_____:_____:_____:_____:_____:_____:_____ **FAIR**

extremely quite slightly neither slightly quite extremely

3 In general, I think most people I know would approve of me estimating deductions "in my favor" or not reporting all of my income to the IRS?

LIKELY_____:_____:_____:_____:_____:_____:_____ **UNLIKELY**

extremely quite slightly not sure slightly quite extremely

4 In general, I think it is morally wrong to "cheat" on my taxes regardless of the situation.

AGREE_____:_____:_____:_____:_____:_____:_____ **DISAGREE**

strongly somewhat slightly neither slightly somewhat strongly

5 In general, I think it would be easy for me to "cheat" on my taxes and get away with it.

AGREE_____:_____:_____:_____:_____:_____:_____ **DISAGREE**

strongly somewhat slightly neither slightly somewhat strongly

6 In general, I think cheating on my taxes is

GOOD_____:_____:_____:_____:_____:_____:_____ **BAD**

extremely quite slightly neither slightly quite extremely

7 There have been times when preparing my federal income tax return that I have estimated a deduction amount "in my favor"

LIKELY_____:_____:_____:_____:_____:_____:_____ **UNLIKELY**

extremely quite slightly not sure slightly quite extremely

8 There have been times when I didn't include income on my tax return because I knew it wasn't reported to the IRS by a third-party

LIKELY_____:_____:_____:_____:_____:_____:_____ **UNLIKELY**

extremely quite slightly not sure slightly quite extremely

9 Please rate your familiarity with the situations included in this questionnaire

Situation One (Tip Situation)

FAMILIAR_____:_____:_____:_____:_____:_____:_____ **UN-FAMILIAR**

extremely quite slightly neither slightly quite extremely

Situation Two (Home Office Expense Situation)

FAMILIAR_____:_____:_____:_____:_____:_____:_____ **UN-FAMILIAR**

extremely quite slightly neither slightly quite extremely

10 My gender

1) MALE
2) FEMALE

11 My present age ___ years

12. Who usually prepares my tax return

1) I DO
2) MY SPOUSE
3) PAID PREPARER (H&R Block, CPA, etc)
4) OTHER (please specify) _____

13 The highest level of education that I have completed

1) LESS THAN HIGH SCHOOL
2) HIGH SCHOOL
3) SOME COLLEGE
4) BACHELORS DEGREE
5) MASTERS DEGREE
6) OTHER ADVANCED DEGREE

14 My family income level (before taxes)

1) UNDER $20 000
2) $20 001-$50 000
3) $50 001-$75 000
4) OVER $75 000

15 Does your regular work involve preparing federal income tax forms or any related tasks?
YES NO

Thank you for completing this questionnaire. Your contribution to this research effort is greatly appreciated. If you would like a summary of the results, write "copy of results" and your name and address on the return envelope. To insure confidentiality of your responses, do not put your name on this questionnaire.

APPENDIX D
DEMOGRAPHICS BY GROUP

APPENDIX D
DEMOGRAPHICS BY GROUP

Table D-1
Demographics by Group

	Full Sample	Random Mail-out	School Parents	Masters Students	Business Students	Accounting Students
Age						
Under 25	27%	2%		18%	62%	28%
25-44	62%	70%	83%	78%	38%	64%
45-64	10%	26%	17%	4%	-	8%
65+	1%	2%			-	
Family Income						
$20,000 or less	17%	8%	37%	27%	13%	20%
20,000-50,000	39%	33%	16%	27%	52%	48%
50,001-75,000	27%	35%	26%	27%	22%	24%
$75,000+	17%	24%	21%	19%	13%	8%
Sex						
Male	47%	64%	11%	54%	47%	29%
Female	53%	38%	89%	46%	53%	71%
Education						
Did not Complete H S	1%	2%	—	—	—	—
H S Graduate	5%	18%		—	5%	
Some College	46%	28%	44%	—	76%	68%
College Grad	37%	40%	28%	89%	17%	28%
Post-Grad	11%	28%	28%	11%	2%	4%
Who Prepares Tax Return?						
Me/Spouse	64%	45%	58%	100%	58%	80%
Paid Preparer	27%	48%	32%		24%	20%
Other	9%	8%	10%	—	18%	

*Numbers are expressed as a percentage of the respondents from each group that identified themselves to be in each category

APPENDIX E
CORRELATION STATISTICS
ATTITUDE DETERMINANT VARIABLES

Table E-1
Correlation Statistics:
Business Deduction Scenario

	Attitude	Guilt Belief	Tax Paid Belief	Illegal Belief	Fairness Belief
Guilt Belief	50* (.0001)				
Tax Paid Belief	60 (.0001)	45 (.0001)			
Illegal Belief	45 (.0001)	37 (.0001)	48 (.0001)		
Fairness Belief	46 (.0001)	30 (.002)	51 (.0001)	30 (.001)	
Penalty Belief	28 (.003)	18 (.06)	21 (.026)	15 (.11)	- 11 (.27)

*Cell entries are Pearson Correlation Coefficients (p-values)

Table E-2
Correlation Statistics:
Charitable Contribution Scenario

	Attitude	Guilt Belief	Tax Paid Belief	Illegal Belief	Fairness Belief
Guilt Belief	51* (.0001)				
Tax Paid Belief	50 (.0001)	55 (.0001)			
Illegal Belief	55 (.0001)	63 (.0001)	49 (.0001)		
Fairness Belief	43 (.0001)	44 (.002)	60 (.0001)	46 (.0001)	
Penalty Belief	10 (.28)	29 (.002)	13 (.16)	33 (.0002)	00 (.99)

*Cell entries are Pearson Correlation Coefficients (p-values)

Table E-3
Correlation Statistics
Tip Scenario

	Attitude	Guilt Belief	Tax Paid Belief	Illegal Belief	Fairness Belief
Guilt Belief	.32* (.0004)				
Tax Paid Belief	.50 (.0001)	.52 (.0001)			
Illegal Belief	.56 (.0001)	.40 (.0001)	.60 (.0001)		
Fairness Belief	.42 (.0001)	.34 (.0002)	.58 (.0001)	.46 (.0001)	
Penalty Belief	-.01 (.92)	.12 (.22)	.01 (.95)	.06 (.54)	.05 (.610)

*Cell entries are Fearson Correlation Coefficients (p-values)

APPENDIX F
CORRELATION COEFFICIENTS
COMPLIANCE HYPOTHESES VARIABLES

Table F-1
Correlation Coefficients Compliance Hypotheses Variables
*Business Deduction Scenario**

	CI	ATT	SN	PBC	MO	Fair Belief	Guilt Belief	Illegal Belief	Penalty Belief	TaxPaid Belief	Rule Fair	System Fair
Attitude	.71 (.00)											
SN	.53 (.00)	.46 (.00)										
PBC	.28 (.00)	.35 (.00)	.19 (.04)									
MO	-.00 (.00)	-.77 (.00)	.41 (.00)	-.22 (.02)								
Fair Belief	.35 (.00)	.43 (.00)	.28 (.00)	.15 (.11)	.33 (.00)							
Guilt Belief	.55 (.00)	.51 (.00)	.27 (.00)	.21 (.03)	-.45 (.00)	.27 (.00)						
Illegal Belief	.48 (.00)	.48 (.00)	.31 (.00)	.10 (.29)	.39 (.00)	.28 (.00)	.38 (.00)					
Penalty Belief	.24 (.01)	.20 (.03)	.18 (.05)	.18 (.05)	-.11 (.25)	.05 (.57)	.08 (.39)	.10 (.28)				
TaxPaid Belief	.56 (.00)	.61 (.00)	.55 (.00)	.15 (.10)	-.51 (.00)	.49 (.00)	.47 (.00)	.49 (.00)	.11 (.22)			
Rule Fair	.01 (.90)	.11 (.22)	.04 (.38)	.02 (.80)	-.16 (.09)	.09 (.33)	.18 (.05)	.09 (.33)	-.09 (.36)	.04 (.63)		
System Fair	.07 (.42)	.02 (.80)	.22 (.02)	.06 (.52)	.06 (.50)	.13 (.17)	.09 (.35)	.07 (.46)	.02 (.85)	.07 (.45)	.20 (.03)	
AmtPay Fair	.22 (.02)	.10 (.06)	.25 (.01)	.15 (.11)	.17 (.07)	.11 (.26)	.14 (.13)	.17 (.08)	.02 (.83)	.08 (.51)	.20 (.03)	.78 (.00)

*Cell entries are pearson correlation coefficients (p-values)

Table F-2
Correlation Coefficients Compliance Hypothesis Variables
*Charitable Contribution Scenario**

	CI	ATT	SN	PBC	MO	Fair Belief	Guilt Belief	Illegal Belief	Penalty Belief	TaxPaid Belief	Rule Fair	System Fair
Attitude	.50 (.00)											
SN	40 (.00)	43 (.00)										
PBC	20 (.08)	.28 (.00)	31 (.00)									
MO	-55 (.00)	66 (.00)	40 (.00)	14 (.14)								
Fair Belief	30 (.00)	43 (.00)	38 (.00)	07 (.47)	51 (.00)							
Guilt Belief	35 (.00)	51 (.00)	31 (.00)	20 (.04)	.52 (.00)	.44 (.00)						
Illegal Belief	33 (.00)	56 (.00)	30 (.00)	.21 (.02)	51 (.00)	.47 (.00)	63 (.00)					
Penalty Belief	-.05 (.58)	11 (.24)	04 (.69)	10 (.28)	08 (.40)	00 (.99)	.29 (.00)	.33 (.00)				
TaxPaid Belief	.36 (.00)	50 (.00)	40 (.00)	04 (.65)	60 (.00)	60 (.00)	.55 (.00)	49 (.00)	13 (.15)			
Rule Fair	13 (.16)	16 (.08)	07 (.44)	05 (.61)	08 (.38)	01 (.89)	17 (.07)	.28 (.00)	11 (.26)	13 (.15)		
System Fair	08 (.38)	11 (.22)	10 (.30)	09 (.34)	04 (.70)	16 (.08)	07 (.44)	10 (.26)	.04 (.66)	18 (.06)	07 (.43)	
AmtPay Fair	08 (.38)	07 (.48)	01 (.89)	06 (.53)	.00 (.99)	10 (.28)	02 (.85)	10 (.27)	.04 (.63)	06 (.55)	.23 (.01)	72 (.00)

*Cell entries are pearson correlation coefficients (p-values)

Table F 3

Correlation Coefficients: Compliance Hypotheses Variables

*Tip Scenario**

	CI	ATT	SN	PBC	MO	Fair Belief	Guilt Belief	Illegal Belief	Penalty Belief	TaxPaid Belief	Rule Fair	System Fair
Attitude	.45 (.00)											
SN	.56 (.00)	.45 (.00)										
PBC	.41 (.00)	.04 (.63)	.34 (.00)									
MO	.50 (.00)	.50 (.00)	-.41 (.00)	.14 (.14)								
Fair Belief	.56 (.00)	.42 (.00)	.40 (.00)	.24 (.01)	-.48 (.00)							
Guilt Belief	.53 (.00)	.32 (.00)	.20 (.03)	.22 (.02)	-.31 (.00)	.34 (.00)						
Illegal Belief	.51 (.00)	.58 (.00)	.40 (.00)	.26 (.01)	-.52 (.00)	.47 (.00)	.40 (.00)					
Penalty Belief	.10 (.27)	.01 (.92)	.10 (.09)	.27 (.00)	.02 (.80)	.05 (.61)	.12 (.22)	.08 (.54)				
TaxPaid Belief	.60 (.00)	.50 (.00)	.31 (.00)	.11 (.24)	.40 (.00)	.58 (.00)	.52 (.00)	.60 (.00)	.01 (.95)			
Rule Fair	.43 (.00)	.42 (.00)	.26 (.01)	.01 (.95)	-.38 (.00)	.44 (.00)	.35 (.00)	.38 (.00)	-.07 (.48)	.49 (.00)		
System Fair	.16 (.08)	.17 (.08)	.14 (.13)	.10 (.27)	-.15 (.12)	.38 (.00)	.28 (.00)	.30 (.00)	.08 (.34)	.39 (.00)	.46 (.00)	
AuditPay Fair	.22 (.02)	.20 (.00)	.16 (.10)	.08 (.34)	.20 (.04)	.37 (.00)	.18 (.06)	.22 (.02)	.06 (.55)	.37 (.00)	.47 (.00)	.74 (.00)

*Cell entries are pearson correlation coefficients (p-values)

BIBLIOGRAPHY

Ajzen I 1982 Equity to Attitude Formation and Change. In *Equity and Justice in Social Behavior* edited by R L Cohen Academic Press, Inc. 161-186

Ajzen I. 1991 The Theory of Planned Behavior *Organizational Behavior and Human Decision Processes* 55 179-211

Ajzen, I and B L. Driver 1991 Prediction of Leisure Participation from Behavioral Normative, and Control Beliefs An Application of the Theory of Planned Behavior *Leisure Sciences* 13 185-204

Ajzen, I and M Fishbein. 1980 *Understanding Attitudes and Predicting Social Behavior* Englewood Cliffs N.J Prentice-Hall Inc

Alm, J 1991 A Perspective on the Experimental Analysis of Taxpayer Reporting. *The Accounting Review* 66 (July) 577-593

Beck L. and I. Ajzen 1991 Predicting Dishonest Actions Using the Theory of Planned Behavior *Journal of Research in Personality* 25(3) 285 301

Carroll John S 1992 How Taxpayers Think about Their Taxes' Frames and Values. In *Why People Pay Taxes Tax Compliance and Enforcement*, edited by J Slemrod Ann Arbor University of Michigan Press 43-63

Christensen A L, and S G Weihrich. 1993 Perceptions of Tax Fairness A Multiple Constituency Approach Working Paper, Portland State University, Portland, OR.

Collins J H V C Milliron, and D R. Toy 1992 Determinants of Tax Compliance. A Contingency Approach *The Journal of the American Taxation Association* Fall 1-29

Copeland P V and P J Harmelink 1995 Using Taxpayers Perceptions of Fairness to Redesign the Federal Income Tax Structure In *Advances in Taxation* edited by T M Porcano Greenwich, CT JAI Press Inc 43 72

Cowell F A 1990 *Cheating the Government.* Cambridge, MA The MIT Press

Deutsch, M 1975 Equity, Equality, and Need. What Determines Which Value Will Be Used as the Basis of Distributive Justice? *Journal of Social Issues* 31 137-149

Dillman, D. A. 1978. *Mail and Telephone Surveys: The Total Design Method.* New York: John Wiley and Sons, Inc.

Eagly, A. H. and S. Chaiken. 1993. *The Psychology of Attitudes.* Orlando, FL: Harcourt Brace Jovanovich, Inc.

Etzioni, A. 1986. Tax Evasion and Perceptions of Tax Fairness: A Research Note. *The Journal of Applied Behavioral Science.* 22: 177-185.

Fischer, C. M., M. Wartick and M. M. Mark. 1992. Detection Probability and Taxpayer Compliance: A Literature Review. *Journal of Accounting Literature.* 11: (1-46).

Gerbing, M.D. 1988. An Empirical Study of Taxpayer Perceptions of Fairness. Working Paper. Lewis and Clark College, Portland, Oregon.

Greenberg, J. 1982. Approaching Equity and Avoiding Inequity in Groups and Organizations. In *Equity and Justice in Social Behavior.* edited by J. Greenberg and R.L. Cohen. New York: Academic Press, Inc.

Greenberg, J. 1987. Reactions to Procedural Injustice in Payment Distributions. Do the Means Justify the Ends? *Journal of Applied Psychology.* 72: 55-61.

Herek, G. M. 1986. The Instrumentality of Attitudes: Toward a Neofunctional Theory. *Journal of Social Issues.* 42: 99-114.

Herek, G. M. 1987. Can Functions Be Measured? A New Perspective on the Functional Approach to Attitudes. *Social Psychology Quarterly.* 50: 285-303.

Hite, P. A., and M. L. Roberts. 1991. An Experimental Investigation of Taxpayer Judgments on Rate Structure in the Individual Income Tax System. *The Journal of the American Taxation Association.* 13 (Fall): 47-63.

Hite, P. A., and M. L. Roberts. 1992. An Analysis of Tax Reform Based on Taxpayers Perceptions of Fairness and Self-Interest. In *Advances in Taxation,* edited by J.J. Stern. Greenwich, CT: JAI Press Inc. 115-138.

Jackson, B. R. and V. C. Milhron. 1986. Tax Compliance Research. Findings, Problems, and Prospects. *Journal of Accounting Literature.* 5: 125-165.

Katz, D. 1960. The Functional Approach to the Study of Attitudes. *Public Opinion Quarterly.* 24: 163-204.

Kinsey, K.A. 1989. The Meaning of Income Tax Fairness. Working Paper. The American Bar Foundation.

Kinsey K A 1992 Deterrence and Alienation Effects of IRS Enforcement. An Analysis of Survey Data In *Why People Pay Taxes Tax Compliance and Enforcement* edited by J Slemrod Ann Arbor University of Michigan Press 259-290

Kinsey, K. A and H G Grasmick. 1993 Did the Tax Reform Act of 1986 Improve Compliance? Three Studies of Pre-and Post-TRA Compliance Attitudes *Law & Policy* 15 (4) 293-325

Kinsey, K. A , H G Grasmick, and K. W. Smith 1991. Framing Justice Taxpayer Evaluations of Personal Tax Burdens *Law and Society Review* 25 845-873

Kinsey, K A. and K Smith 1989 Income Tax Cheating Opportunities, Preferences, and Sanctions American Bar Foundation Tax Compliance Working Paper no 8718 Chicago American Bar Foundation.

Klepper, S and D Nagin 1989 The Role of Tax Practitioners in Tax Compliance *Policy Sciences* 22 167-194

Leventhal, G S 1980 What Should Be Done with Equity Theory? New Approaches to the Study of Fairness in Social Relationships In *Social Exchange Advances in Theory and Research.* edited by Gergen, Greenberg and Hillis Plenum Press. 27-55

Lewis, A. 1982. *The Psychology of Taxation.* Oxford, England Martin Robertson & Company Ltd.

Long S B , and J.A. Swingen 1991 Taxpayer Compliance Setting New Agendas for Research *Law and Society Review* 25 637-683

Mason, R., and L D Calvin 1984 Public Confidence and Admitted Tax Evasion *National Tax Journal* 37 (4) 489-496

Milliron, V C 1985 An Analysis of the Relationship Between Tax Equity and Tax Complexity *The Journal of the American Taxation Association* Fall 19-33

Moser, D V., J H Evans III C K. Kim. 1995 The Effects of Horizontal and Exchange Inequity on Tax Reporting Decisions *The Accounting Review* 70 (4) 619-634

Myers, D G 1993 *Social Psychology* New York McGraw-Hill, Inc

National Commission on Economic Growth and Tax Reform 1996 Unleashing America's Potential A pro-growth, pro-family tax system for the 21st century *Tax Notes* January 22, 1996 413-450

Parker, D., A. S. R. Manstead, S. G. Stradling. 1995. Extending the Theory of Planned Behaviour: The Role of Personal Norm. *British Journal of Social Psychology* 34(June): 127-137.

Porcano, T. M. and C. E. Price. 1992. Some Evidence on the Association Between Judgment Criteria and Fairness Perceptions. In *Advances in Taxation*, edited by J. J. Stern. Greenwich, CT: JAI Press Inc. 183-210.

Reckers, P. M. J., D. L. Sanders, S. J. Roark. 1994. The Influence of Ethical Attitudes on Taxpayer Compliance. *National Tax Journal* 47 (4): 825-836.

Rosenberg, M.J. 1956. Cognitive Structure and Attitudinal Affect. *Journal of Abnormal and Social Psychology* 23: 367-372.

Roth, J. A., J. T. Scholz, A. D. Witte (eds). 1989. *Taxpayer Compliance. Vol. 1: An Agenda for Research*. Philadelphia: University of Pennsylvania Press.

Roth, J. A. and J. T. Scholz (eds.). 1989. *Taxpayer Compliance. Vol.2: Social Science Perspectives*. Philadelphia: University of Pennsylvania Press.

Schlegal, R. P., J. R. d'Avernas, M. P. Zanna, N. H. DeCourville, and S. R. Manske. 1992. Problem Drinking: A Problem for the Theory of Reasoned Action? *Journal of Applied Social Psychology* 22:358-385.

Scott, W. J. and H. G. Grasmick. 1981. Deterrence and Income Tax Cheating: Testing Interaction Hypotheses in Utilitarian Theories. *The Journal of Applied Behavioral Science* 17 (3): 395-408.

Slemrod, J. and J. Bakija. 1997. *Taxing Ourselves: A Citizen's Guide to the Great Debate Over Tax Reform*. Cambridge, MA: Massachusetts Institute of Technology.

Smith, K. 1992. Reciprocity and Fairness: Positive Incentives for Tax Compliance. In *Why People Pay Taxes: Tax Compliance and Enforcement*, edited by J. Slemrod. Ann Arbor: University of Michigan Press: 223-257.

Sparks, P., R. Shepherd, N. Wieringa, and N. Zimmermanns. 1995. Perceived Behavioral Control, Unrealistic Optimism and Dietary Changes: an Exploratory Study. *Appetite* 24 (3): 243-255.

Spicer, M. W., and L. A. Becker. 1980. Fiscal Inequity and Tax Evasion: An Experimental Approach. *National Tax Journal* 33 (June): 171-175.

Spicer, M. W., and S. B. Lundstedt. 1976. Understanding Tax Evasion. *Public Finance* 31: 295-305.

Steenbergen, M. R., K. M. McGraw, and J. T. Scholz. 1992. Taxpayer Adaptation to the 1986 Tax Reform Act: Do New Tax Laws Affect the Way Taxpayers Think about Taxes? In *Why People Pay Taxes: Tax Compliance and Enforcement*, edited by J. Slemrod. Ann Arbor: University of Michigan Press: 9-41.

Taylor, S. and P. Todd. 1995. An Integrated Model of Waste Management Behavior: A Test of Household Recycling and Composting Intentions. *Environment and Behavior*. 27 (5) 603-630.

Tetlock, P.E. 1985. Accountability: The Neglected Social Context of Judgment and Choice. *Research in Organizational Behavior*. 7: 297-332.

Vines, C. and M. Wartick. 1997. Tax Reporting Implications of Asymmetric Treatment: Direct Subsidies Versus Tax Deductions. Working Paper. University of Arizona. Tucson, Arizona.

Wartick, M. L. 1994. Legislative Justification and the Perceived Fairness of Tax Law Changes: A Referent Cognitions Theory Approach. *The Journal of the American Taxation Association*. 16 (Fall): 106-123.

Worsham, R. 1996. The Effect of Tax Authority Behavior on Taxpayer Compliance: A Procedural Justice Approach. *Journal of the American Taxation Association*. 18 (Fall): 19-39.

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I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality as a dissertation for the degree of Doctor of Philosophy

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